

FOOD PRODUCTION AND REGIONAL DEVELOPMENT
IN BAHIA, BRAZIL

By

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TO

RAYMOND E. CRIST

Docteur es Lettres

Geographer, Counselor, and Friend

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LIST OF ABBREVIATIONS AND TERMS USED IN TEXT

AAG	<u>Annals</u> , Association of American Geographers.
ABCAR	Associação Brasileira de Crédito e Assistência Rural (Brazilian Association of Rural Credit and Assistance).
abóbora	A kind of squash of the <u>Cucurbita</u> family.
ACAR	Associação de Crédito e Assistência Rural (Association of Rural Credit and Assistance).
aipim	Sweet cassava (<u>Manihot aipi</u>).
ANCAR	Associação Nordestina de Crédito e Assistência Rural (Northeast Association of Rural Credit and Assistance).
ANCARBA	Associação Nordestina de Crédito e Assistência Rural da Bahia (Northeast Association of Rural Credit and Assistance of the State of Bahia).
ARENA	Aliança Renovadora Nacional (National Renovation Alliance).
BNB	Banco do Nordeste do Brasil (Bank of the Northeast of Brazil).
BNDE	Banco Nacional do Desenvolvimento Econômico (National Bank for Economic Development).
CEASA/BA	Centro de Abastecimento, S. A., da Bahia (Supply Center, Inc., of Bahia).
CEPEC	Centro de Pesquisas do Cacau (Cacau Research Center).
chu-chu	Chayote (<u>Sechium edule</u>); in Brazilian Portuguese, sometimes written "xu-xu."
CIA	Centro Industrial de Aratu (Aratu Industrial Center).
CONDER	Conselho de Desenvolvimento do Recôncavo (Recôncavo Development Committee).
coronelismo	The system of political bossism (by "colonels") that was widespread in rural areas during the First Republic (1889-1930) and still exists in modified form in some rural areas of the Northeast.

CVSF	Comissão do Vale do São Francisco (São Francisco Valley Commission--now known as SUVALE).
DCOOP	Divisão de Cooperativismo (Cooperative Division of the State Secretary of Agriculture).
DEE	Departamento Estadual de Estatística (State Department of Statistics).
DER-Ba	Departamento de Estradas de Rodagem da Bahia (State of Bahia Department of Highways).
DERUR	Departamento Rural (Rural Department of the BNB).
DNER	Departamento Nacional de Estradas de Rodagem (National Department of Highways).
DNOCS	Departamento Nacional de Obras Contra as Sêcas (National Department of Works Against the Drought).
ETENE	Departamento de Estudos Econômicos do Nordeste (BNB Department of Economic Studies of the Northeast).
farinha de mandioca	flour made from manioc (<u>Manihot utilissima</u>).
IAA	Instituto do Açúcar e do Alcool (Institute of Sugar and Alcohol).
IBCR	Instituto Baiano de Crédito Rural (Bahian Institute of Rural Credit).
IBF	Instituto Bahiano do Fumo (Bahian Tobacco Institute).
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics).
IBRA	Instituto Brasileiro de Reforma Agrária (Brazilian Institute of Agrarian Reform--functions of IBRA are now performed by INCRA).
INCRA	Instituto Nacional de Colonização e Reforma Agrária (National Institute of Colonization and Agrarian Reform--performs functions formerly carried out by IBRA and INDA).
INDA	Instituto Nacional de Desenvolvimento Agrário (National Institute of Agrarian Development--functions of INDA are now performed by INCRA).

IPEAL	Instituto de Pesquisas e Experimentação Agropecuárias do Leste (Agricultural Research and Experiment Institute of the East).
IPEANE	Instituto de Pesquisa e Experimentação Agropecuárias do Nordeste (Agricultural Research and Experiment Institute of the Northeast).
mestre de saveiro	Captain of a <u>saveiro</u> .
MDB	Movimento Democrático Brasileiro (Brazilian Democratic Movement).
MOBRAL	Movimento Brasileiro de Alfabetização (Brazilian Literacy Movement).
PIN	Programa de Integração Nacional (Program of National Integration).
PROTERRA	Programa de Redistribuição de Terras (Program of Land Redistribution).
PROVALE	Programa Especial para o Vale do São Francisco (Special Program for the São Francisco Valley).
PSB	Partido Socialista Brasileiro (Brazilian Socialist Party).
PSD	Partido Social Democrático (Social Democratic Party).
PTB	Partido Trabalhista Brasileiro (Brazilian Labor Party).
rampa do mercado	Small harbor in the lower city of Salvador that is still used by <u>saveiros</u> even though the market was destroyed by fire in 1969.
RBEF	<u>Revista Brasileira de Estudos Políticos</u> (Brazilian Quarterly of Political Studies).
RBG	<u>Revista Brasileira de Geografia</u> (Brazilian Quarterly of Geography).
saveiro	Lateen-rigged sailboat used for fishing and to haul cargo on the Bahia de Todos os Santos.
SIA	Setor de Investigações Agrícolas (BNB Sector of Agricultural Investigations).
SIM	Serviço de Informações de Mercado (Market Information Service of the Secretary of Agriculture).

SMTC	Superintendência Municipal de Transportes Coletivas (Municipal Superintendency of Public Transportation).
SUDENE	Superintendência do Desenvolvimento do Nordeste (Superintendency for the Development of the North-east).
SUNAB	Superintendência Nacional do Abastecimento (National Superintendency for Food Supply).
SUVALE	Superintendência do Vale do São Francisco (Superin- tendency for the São Francisco Valley--formerly CVSF).
UDN	União Democrática Nacional (National Democratic Union).
UFBa	Universidade Federal da Bahia (Federal University of Bahia).
USAID	United States Agency for International Development.
vendedores ambulantes	Costermongers who sell fresh fruit and vegetables door-to-door, on street corners, or at temporary stands in the public markets.

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Among the goals of the Brazilian government is the attainment of balanced economic development of the different regions that compose this vast nation. The Northeast, the most underdeveloped region in Brazil, has received special attention from the government, and several programs are designed to assist this area. Major emphasis has been placed on the establishment of industries, but because the industrialization that has taken place is highly capital intensive, little employment has been created. Agricultural development has lagged, especially in the sector of food production. Traditional agricultural institutions inhibit rural development, and migrants from stagnating rural areas flock to the cities where the great majority eke out a precarious existence in marginal employment.

The aim of this study is to describe the importance of

food production on regional development in the state of Bahia, the largest of the nine states that constitute the Northeast. Emphasis is placed on the production of food for the city of Salvador, the capital of Bahia and the second most important city in the Northeast. The focus of this study is on the production of horticultural produce for Salvador's urban population, because this sector of agriculture is highly labor intensive in Brazil.

The von Thünen model for the location of agricultural areas around an urban center is used as an idealized situation with which the real patterns of land use around Salvador is compared. The von Thünen pattern has been almost eliminated from the agricultural landscape of industrialized nations because of the revolutions in technology and transportation methods, but this model remains an excellent analytical tool for the investigation of agricultural patterns in developing nations. Information concerning the origin of horticultural products consumed in Salvador was adapted from statistical data compiled by officials working for the Secretary of Agriculture of the state of Bahia.

In order to explain the differences between the von Thünen model and the reality of land use patterns around Salvador, this study describes several factors that have had an important influence on the development of agriculture in the state of Bahia. The factors that are analyzed are the physical

setting, historical background, the transportation network, the marketing system, and politics and agricultural policies.

The subsistence farmer, the producer of food products in Bahia, remains mired in a traditional agricultural system whose institutions retard his productivity and prevent him from improving his economic and social position. In order for the Northeast to achieve balanced development, the small farmer must be given substantial and sustained assistance to enable him to make the transition from traditional to modern Brazil. Programs to help the small farmer include agricultural research, rural extension services, assistance to cooperatives, and rural education. Such programs now exist in Bahia, but they have not received the attention and support that they merit. In order to increase food supplies for urban areas and stimulate regional development, these programs must be given the highest priority.

CHAPTER I

INTRODUCTION

If all the good farm land is concentrated in a rigid single-crop system, the major demand for food will have to be met out of imports. In the Northeast, the major demand in the cities tends to be met in food imports from the south, thus contributing to an increase in the disparity between nominal wage levels and productivity, to the detriment of the poorer region. However large the relative advantage of sugar production in the Northeast may be, it must be borne in mind that that sector employs only a small part of the population and that industrialization will be impracticable if the urban populations depend for their food partly on goods brought in from southern Brazil.*

Celso Furtado (104: 268-69)

Brazil's quest for national modernization and economic and social progress includes a strong emphasis on balanced growth of the widely differentiated regions which compose this vast nation. In order to achieve balanced development, the production of food supplies for rapidly expanding urban centers is of great importance. The purpose of this dissertation is to describe and analyze the impact of food production for Salvador, Bahia, Brazil,**

* Except where indicated in the List of References, all translations in this dissertation are by its author.

** Salvador, the capital of the state of Bahia, is a port city on the magnificent bay, Bahia de Todos os Santos. Many Brazilians refer to the city and the state as "Bahia." For example,

one of the most important and vital cities of the Northeast, in the process of regional development in the state of Bahia.

In 1961 Singer wrote that "the agrarian structure of Brazil was in conflict with economic development in at least two crucial points: in the deficit of food supply to cities and in the insufficiency of an internal market for industrial products that should be provided by agriculture"(227: 80). This statement is still true today. The cause of the conflict between agriculture and economic development is attributed by Lambert to the duality in the socioeconomic system which finds Brazilians divided in two systems of economic and social organization (140: 101), by Guimarães to the old methods of agricultural production that have been inherited from colonial feudalism (118: 32), and by Frank to the inherent contradictions of the capitalist system (99: 240).

The framework provided by Lambert is used in this dissertation. He maintains that there are two Brazils, very different in many respects but united by the same national sentiment and by many common values; they do not constitute two different civilizations, but two epochs of the same civilization. "The two Brazils are equally Brazilian, but they are separated by several centuries" (140: 103). Lambert contends that there is a modern Brazil and a

the highway from Rio de Janeiro to Salvador is known to one and all as the "Rio-Bahia." In this dissertation the word "Bahia" will be used only in reference to the state and "Salvador" will be used for the city.

traditional Brazil and that most of the agricultural sector devoted to food production is a part of the latter. The structural problems of agriculture in the Northeast are in large measure responsible for the distorted spatial distribution of areas that produce food for its urban centers. These structural problems are caused by the remnants of a patriarchal system and by the failure to replace this paternalistic system with other viable social and economic institutions.

Brazilian development organizations recognize the problem of inadequate structures. The Bank of the Northeast (BNB) states in a recent publication that "the conditions of agrarian structure in the Northeast, as in the rest of the country, constitute one of the serious problems for the development of agriculture"(3: 71). Unfortunately, attempts to modify existing agrarian structures often turn out to be physical improvements such as road construction and government sponsored markets. Important and necessary as these projects are, they often serve only to facilitate the flow of food products from southern Brazil unless they are accompanied by concerted programs to assist local farmers. Within any rural development effort there must always be two basic terms of reference -- one aimed at changing the environment in some way such as creating farming units of economical size, development of water resources, soil conservation, and road building. The other basic reform necessary for development is to change the people who are expected to bring about development. It is not as easy to change people as it is to

change the environment, and for this reason programs to develop human resources are often slighted in favor of infrastructural projects.

A second and unfortunate factor is the belief, held by some economists, that modernization in the industrial sector will automatically bring modernization in agriculture. Dunn writes that "The adaptation of agriculture to the needs of an industrialized society results from an organic necessity--from an indispensable correlation between interdependent functions"(80: 82). This thought is echoed in the BNB report of 1971 which states that accelerated growth is basically associated with the great expansion predicted for the industrial sector; industrial growth will increase demand for agricultural products thus inducing the modernization of agriculture (195: 71). Adherence to the belief that agricultural structures will automatically be transformed as a result of industrialization causes much-needed programs designed to modify these structures to be given low priority or ignored completely.

Failure to develop the agricultural resources of the Northeast has several adverse effects: food is imported, resulting in higher prices for the urban population; farmers at the subsistence level are unable to purchase the consumer goods that would spur local industries; local capital is drained off to purchase food, thus widening regional imbalances; unable to make a living on the land, agriculturists are forced to migrate to the cities increasing an already considerable slum population.

The need to develop rural resources is obvious, but the belief that solutions will be provided by investment in public works projects and industry is a snare and a delusion. The key is only to be found through a concerted attack on remaining archaic institutions and the development of social and economic institutions to replace those which functioned under a paternalistic system. Development of human resources through improvement and strengthening of existing programs in rural extension, education, cooperatives, and research is essential. As Crist points out, the day of an improved life for the subsistence and marginal farmers will come only when "there is widespread education in farming methods and techniques, when agriculture will be as assiduously served by educational institutions as are modern industry and the liberal professions, when soils scientists, agricultural engineers, and county agents have no more feelings of inferiority than do biochemists or nuclear physicists"(66: 517).

Studies of the Urban Food Supply Problem

The high rate of urbanization experienced by Brazil during the past two decades has focused attention on the problem of urban food supply. With thousands of rural migrants moving to the cities where many eke out a precarious existence through employment in marginal service jobs, the problem of providing an adequate supply of food at reasonable prices has received

increasing consideration by government at the national, state, and city levels and by development agencies.

Pioneer work in the field of urban food supply was conducted by Webb in his studies of the geography of food supply of Belo Horizonte and Fortaleza (254; 255). The latter work was used as a model by the BNB and the Superintendency for the Development of the Northeast (SUDENE) for a series of investigations of the food supply problem of the major cities of the Northeast, including Campina Grande, Salvador, São Luis, and Maceió (1; 237; 238; 239; 240). The objectives of these BNB/SUDENE studies were to determine the consumption of basic food products, analyze purchasing habits according to income levels, demonstrate the marketing and pricing mechanisms, and describe the food supply problem from its geographic, economic, and demographic aspects.

Another approach to the food supply problem was taken by a team of marketing experts from Michigan State University, sponsored in part by the United States Agency for International Development (USAID). This team, which has conducted similar investigations in La Paz, Bolivia; Cali, Colombia; and San Juan, Puerto Rico, produced a detailed analysis of the market processes of food produce in Recife (230). Largely as a result of the team's recommendations, the national government has initiated a program to construct wholesale supply centers in all cities with a population of more than 500,000, and the Recife study has been used as a guide for the analysis of the food supply

situation of other urban areas.* Other investigations of the problem of food supply in Brazil include Guimarães' 1960 work on Salvador (119) and Andrade's 1962 analysis of Recife (18).

The description of the geography of food supply for Salvador presented in this dissertation differs from previous investigations of the subject in several important respects. In the first place, food supply for a city must be regarded as a rural as well as an urban problem. Food production is an important aspect of regional development. The solution to the food supply problem lies not only in seeking to reduce costs to urban consumers but also in attempting to increase profits of rural producers. Many of these producers are members of Lambert's archaic Brazil, and programs designed to reduce the urban food problem should seek to create the institutions necessary for them to become members of modern Brazil. These institutions would enable them to increase productivity and would reduce the factors which drive them from the land to urban slums where they increase the demand for food instead of increasing the supply. For this reason, the emphasis in this dissertation is on horticultural products, a form of agriculture suited to labor-intensive methods.

A second difference in the approach followed in this study is that the model for the location of agricultural production developed by von Thünen is used as an ideal situation with which the reality of Salvador's condition is compared. Finally, the

* See, for example, the study of food supply for Brasilia, Brazil's new capital city (74).

existing location of the sources of Salvador's food supply are explained by a detailed examination of several factors which are crucial to an understanding of the distortions which exist between the von Thünen ideal and reality. The von Thünen model and the key factors which affect Salvador's food supply situation are discussed below.

The von Thünen Model

Almost 150 years have passed since Johann Heinrich von Thünen published the first theory on the location of agricultural production, but his work still provides an excellent analytical tool (244; 120). Von Thünen developed his theory of agricultural location by assuming that several factors which normally contribute to regional diversity of land use and agricultural production were constant or nonexistent. His Isolated State could perhaps better be called the Ideal State, a title he had considered for his work; his model describes an ideal situation not to be found in reality. By comparing the ideal with observed reality, a more accurate understanding of existing conditions is possible.

Von Thünen's hypotheses contained the following limiting conditions:

1. A very large town is located at the center of a fertile plain which is crossed by no navigable river or canal.
2. Throughout the plain, the soil is capable of cultivation and is of the same fertility.

3. Far from the town, the plain turns into an uncultivated wilderness which cuts off all communication between this State and the outside world.
4. There are no other towns on the plain. The central town must therefore supply the rural areas with all manufactured products, and in return it will obtain all its provisions from the surrounding countryside.

Having established these conditions, von Thünen set out to determine the rational pattern of cultivation. He started from the premise that the areal distribution of crops and livestock depends upon competition between farm outputs for the use of any particular plot of land. On any specified piece of land, the enterprise which yields the highest net return will be conducted; other enterprises will be displaced to plots where they will yield the highest return. By holding all factors constant except transportation costs, von Thünen developed his pattern of agricultural location which consisted of a series of concentric circles with the large town at the center. Proceeding outward from the town, these rings were devoted to: horticulture and dairying; forestry (to provide a source of fuel and construction material for the town); crop rotation without fallow; crop rotation with fallow; three-field system; grazing; and wilderness (Figure 1).

Several writers, including Hoover (125), Losch (149), Isard (134), Chisholm (54), Alonso (8), Day and Tinney (71), Garrison and Marble (109), and Dunn (80) have used the framework outlined by von Thünen to construct more complete and complex

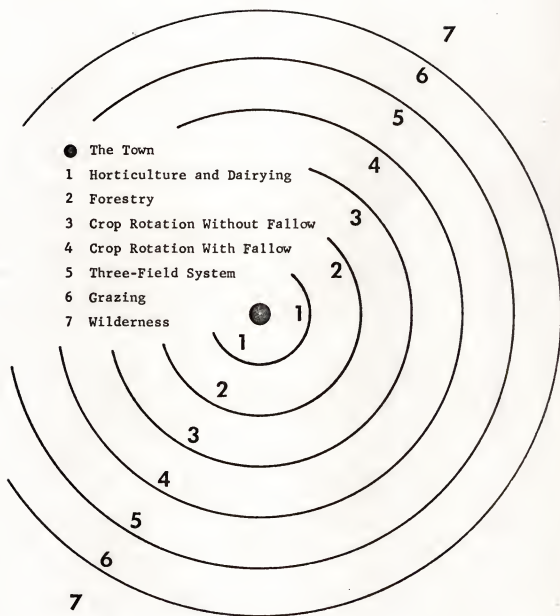


Figure 1. Von Thünen's Isolated State.

models for use in the analysis of land-use patterns. Criticisms of the von Thünen model are not wanting. Henshall finds it in need of some theoretical revision (123: 445); Garrison and Marble believe it to be crude and impractical in some respects (109: 138); Brown considers it and other location models too wedded to classical economic theory (38: 338); and Harvey notes built-in assumptions which limit the model's applicability to real-life situations (121: 364).

In spite of efforts to improve the von Thünen model and the criticisms leveled against it, the model remains a useful analytical tool for understanding land-use patterns around urban areas. Sinclair maintains that "the von Thünen model is still the one against which patterns of agriculture around cities are compared" (226: 73), and Marble and Anderson contend that von Thünen's work is the "basic theory pertaining to the spatial structure of agricultural production"(155:5).

In the presentation of this dissertation, the work of von Thünen is used as a model against which the reality of agricultural land-use patterns around Salvador may be compared. A basis for comparison is necessary. Losch explains that the question of actual location must be distinguished from that of rational location, because the two need not coincide. He adds that "it would be dangerous to conclude that what is must also be rational since otherwise it could not exist" (149: 4).

Criticism of the von Thünen model is, to a great extent, due to the fact that it appears inapplicable to the agricultural

landscape of a modern industrialized nation and because some critics seek more specific information from the model than it was designed to provide. Gregor notes that because of the impressive extent of regional specialization in the United States, Canada, and Western Europe, American geographers "have seen little in their intensely developed agricultural landscape to overly impress them with von Thünen's theory." He states that "Geographers and economists generally agree that the dense transportation nets of the heavily urbanized parts of Northwestern Europe and Eastern North America have now eliminated practically all traces of a von Thünen pattern"(115: 64-7).

The von Thünen model remains appropriate, however, for the so-called developing areas of the world, and, therefore, for the study area of this dissertation. Sinclair writes that the basic forces underlying the von Thünen model continue to operate in the developing parts of the world and that application of the theory can still be made in those areas (226: 73). This same assertion is found in Melamid's statement that many examples, especially in underdeveloped countries, show that the operation of von Thünen's circles can still be observed today (159: L-4).

Waibel found the existence of an agricultural pattern around San Jose, Costa Rica that was similar to that depicted by the von Thünen model (250). In his study of Morelia, Mexico, Dickinson detected a von Thünen pattern in the tributary area south of the city and stated that "The horticultural circle producing high-value perishable products closest to the city

is duplicated in Morelia"(75: 172). Following his work in Addis Ababa, Ethiopia, Horvath commented on the vegetable-producing areas close to the city and concluded that the agricultural patterns around the area under study should "serve to heighten the plausibility of von Thünen's scheme because of the remarkable parallels between von Thünen's crop theory and the agriculture around Addis Ababa" (127: 323).

In developing his land-use model, von Thünen assumed that farming is conducted absolutely rationally. In the terms of classical economics, this means that the farmer seeks maximum profit and that he has all the knowledge required to pursue this goal (120: 8, 194). The von Thünen model has been criticized because of this assumption. Alternatives to the economic motivation thesis that have been suggested include the notions that the peasant seeks to maximize utility or that he seeks to optimize but is willing to sacrifice (146: 329; 96: 132).

In this dissertation it is held that the subsistence farmer is motivated by economic forces. He is no more completely dominated by these forces than he is by environmental factors. Security is very important to him. He wants some recreation. His low productivity, however, is dictated by the constraints of the existing institutions within which he must operate and not by indolence, slothfulness, or a high propensity for leisure. Tax has noted the industriousness and initiative of the Indian in Guatemala (242: 48). Crist has described the Colombian subsistence farmer in transition who, as soon as there is a market

surplus, "will be interested in entering a monetized economy by supplying that market with surplus corn, a fattened hog, a few chickens, papayas, or a bunch of cooking bananas" (65: 138). Schultz views as completely wrong the judgment that small farmers are loafers, squanderers, and inefficient users of the resources at their disposal (220: 4-5). The Commission on International Development reports that the peasant farmer is not hopelessly fettered by custom and tradition and that he does respond to changes in costs and prices (158: 35).

Von Thünen himself wrote that "In our imaginary State, agriculture is invariably conducted in an entirely rational manner. In practice this is exceptional. . . ." He observed that

The prospect of an old age without toil, the desire to secure an easier existence for his children, are powerful motives to induce a man to undergo strain and privation for the best years of his life. But the reward must be worth the sacrifice. Where it is so small that men no longer think the compensation adequate, the production of capital will cease. (120: 297)

Barefoot and illiterate the subsistence farmer may be; stupid he is not. When he is enmeshed in a system that denies access to an improved condition through the medium of additional toil, he will make little effort to improve his productivity. When additional effort is rewarded with a commensurate increase in profits, he will respond accordingly.

Some commentators seem to criticise the von Thünen model,

because they demand more from it than the model was designed to provide. Waibel refutes these critics by pointing out that von Thünen never said that the Isolated State existed in reality; it is merely a principle, an hypothesis, used to explore reality (250: 9). Found correctly observes that one of von Thünen's significant contributions "was a method of analysis--the technique of postulating a simpler-than-reality model based on specific assumptions and deduced relationships to clarify some aspect of a real-life situation" (96: 57). Von Thünen clearly explained his case when he wrote that

The result obtained by studying one factor only at a time, holding all others constant, is not a false result, but merely incomplete, and that it will remain so until every other factor has been subjected to similar inquiry. Thus, every research into an aspect of the problem, however small, contributes to the building of the great edifice. (120: 247)

The goal of this dissertation is to make a contribution to the building of the edifice by describing several factors which have affected the formation of the agricultural landscape that provides food for Salvador. This question is of interest not only to Salvador, nor only to Brazil, but also to much of the world today. Niddrie's statement that "There is in fact no more vexing problem in the modern Caribbean than that of food production" (171: 111) is equally appropriate for much of the inhabited world.

Key Factors that Influence Land Use Patterns

In the development of his model of agricultural location, von Thünen assumed that several factors which contribute to regional diversity of land use were constant or nonexistent. He used transportation costs from farm to market as the one variable factor, although he noted in his writings the effects of relaxing his initial specific assumptions. Geographers have often stressed the influence on land-use patterns of factors which in the original von Thünen scheme were held to be constant or inoperative.

Waibel points out that the use of land depends not only on physical conditions but also on political, economic, and social factors (250: 3), and Gregor observes that geographers have attempted to weigh the importance of economic, cultural, and political influences on the agricultural landscape (115: 57). Spencer and Horvath maintain that cultural processes create agricultural regions and that it is possible to identify six different categories of processes significant to the origin, maturity, and change of an agricultural region: psychological, political, historical, technologic, economic, and agronomic (233: 90).

Considerable study was devoted to the selection of the factors to be examined which influence the geography of food supply for Salvador. The goal was to choose factors which would lend themselves to a comparison with the von Thünen model and which would be pertinent not only to the problem of supplying food to Salvador but also to other urban areas. The elements

selected are similar to those suggested by Spencer and Horvath in many respects. The ones analyzed in the following chapters are: physical setting, historical background, transportation, marketing, and politics. In order to provide an overview of the body of this dissertation and to furnish at the outset a perception of the linkages between the factors chosen for discussion, a brief outline of the main chapters is given below.

Physical Setting and Historical Background

Salvador's situation is entirely different from that embodied in the four conditions mentioned above in the von Thünen hypothesis. The city is located on a peninsula, not at the center of a fertile plain, and the soils of its hinterland are not of uniform fertility. The city was constructed on the shore of the Bahia de Todos os Santos, and transportation by water was the natural way to move cargo and passengers. The site of Salvador was selected so that the city could be defended militarily. Built along a fault line, the city has distinct upper and lower levels, and topography has had a strong influence on the city's market system.

Salvador's location also presents a marked contrast with von Thünen's other assumptions. The city is not, and never has been, isolated from the outside world, nor has it ever had the symbiotic relationship with its hinterland postulated by von Thünen for the Isolated State. Since its founding in 1549, Salvador and its hinterland have been intimately involved in an

economy much larger than a purely local one. Initial patterns of agricultural production were established and maintained not as a result of the hinterland's relationship with the city but as a result of the hinterland's relationship with Portugal. From the point of view of the mother country, sugar cane was the most desirable crop, and land-use policy dictated from Lisbon was the crucial factor in determining the location of agriculture. The legacy of agricultural structures surviving from colonial days continues to have great influence on the geography of Salvador's food supply, and the spatial orientation of agriculture has been intimately shaped and altered by the historical sequence of development.

The adverse effect on food supplies of stimulating sugar cane production in colonial Brazil is one point of agreement among Brazilian writers. Prado writes that in Bahia and Pernambuco, the chronic dearth of food, which frequently amounted to open and widespread famine, resulted from all productive land being devoted to export crops (184: 188); Freyre states that "Brazil during its three centuries of colonial life was a land of uncertain alimentation and difficult sustenance. The shadow of a sterilizing monoculture lay over all" (102: 57); and Castro maintains that "The fact is, from the very beginning, the plantation and the sugar mill were an implacable deterrent to a subsistence agriculture" (48: 95).

Food for Salvador: Past and Present

In the Isolated State, von Thünen states that the first ring of agricultural production around the city will be devoted to horticulture. "Delicate horticultural products, such as cauliflower, strawberries, lettuce, etc., would not survive long journeys by wagon. They can, moreover, be sold only in small quantities while still quite fresh. All these products will be grown near the town. Gardens will, therefore, occupy the land immediately around the town." He later adds that the first ring will provide the town with all the products "which become too costly if they are brought in from farther districts: potatoes, cabbages, roots, green cloves, and so on" (120: 9-10).

The reality of the location of production areas of horticultural products for Salvador differs markedly from that of von Thünen's ideal. Von Thünen believed that areal distribution of crops depended upon competition between farm outputs for the use of any particular plot of land. In the Isolated State, horticultural products would yield the highest net return and would, therefore, be located closest to the town. Salvador was not isolated, however, and the commercial interests of Portugal dictated that sugar cane was the most valuable crop. For this reason food crops were displaced to areas found unsuitable for cane cultivation. Two such areas developed--one within the city limits of Salvador, the other on the western side of the Bahia de Todos os Santos. Recent data demonstrate that some fresh produce for the Salvador market is grown relatively close to the city

but that much is imported from the interior of Bahia and from distant states, especially São Paulo.

Transportation Revolution: From Saveiro to Diesel Truck

The basic force upon which von Thünen developed his land-use model was the cost of transportation. This is no longer the primary determining factor in the formation of the pattern of agricultural land use around urban areas in modern industrialized societies. Henshall notes that changes in transportation methods have been responsible for radically altering the von Thünen patterns (123: 444), and Grotewold asserts that modern transportation methods have done the most to upset the von Thünen theory (117: 353).

Only in recent years has a modern transportation system begun to be constructed in Brazil. Because the original settlement of Brazil consisted of widely scattered colonies along the coast, a fragmented and unconnected transportation network came into being that lasted for centuries. Each settlement area had communication lines running into the interior, but few lines of land transportation connecting coastal cities were developed. This same pattern was followed during Brazil's railroad era and only in the last twenty years, with the construction of highways, has a concerted effort been made to unite the national territory with an integrated transportation system.

For centuries food for Salvador was produced within the city itself or imported from the Recôncavo on saveiros, lateen-

rigged sailboats used for fishing and to haul cargo on the Bahia de Todos os Santos. The recent road construction program has brought into contact different parts of the nation that had previously been isolated from each other. This transportation revolution has enabled produce grown under the modern agricultural methods of the state of São Paulo to enter the Salvador market in competition with produce that is grown locally under an archaic agricultural system.

The Market System: Past and Present

Von Thünen commented on the problem of marketing agricultural produce. In his scheme, the farmer brought his produce to town where horticultural produce was sold directly to consumers at the market place, and grain was sold to merchants. Von Thünen recognized the problem for the farmer when only a few buyers were present because of their ability to offer an agreed-upon low price. He therefore argued that farmers would take their grain to the largest town, because there competition among buyers would assure the farmer the best price (120: 288-9).

The marketing channel by which food produce moves from rural producer to urban consumer is much more complex in Salvador than in von Thünen's idealized situation. In Salvador, modern and traditional market systems exist side-by-side. Some fresh produce is retailed by supermarkets as modern and sophisticated as any in the world; some is hawked in the streets by hordes of costermongers as it has been for centuries. Some fresh produce

enters the market channel through the agency of a cooperative, such as the gigantic Cotia of São Paulo; some enters through weekly periodic fairs held in rural areas where subsistence farmers bring their surplus by muleback for sale to a variety of middlemen.

The marketing channel is an important factor in determining the location of production centers. The more produce handled by supermarkets, the more difficult it is for the produce of the small farmer to reach the urban market, because supermarkets demand that production be on a large scale or that the output of numerous small holdings should pass through a single grading and packing center, such as a cooperative (54: 190-91). In Salvador two basic outlets exist for the retailing of food produced by the small farmer--the large public markets and the mobile fairs which move from section to section of the city on a periodic basis. The public markets are threatened with extinction because of the establishment of a government sponsored wholesale supply center.

Politics and Agricultural Policies

Several chapters of von Thünen's work are devoted to the effects of taxation on the pattern of agricultural production, but he had little to say about the effect of politics on land use. In fact, when commenting on the way in which railroads could induce Poles to accept Russian sovereignty, he cut short his discussion with the curt observation, "But politics must

not enter my work" (120: 276). Politics, however, must definitely enter the work of this dissertation because of its great influence on the agricultural landscape. In order for farmers to induce government to enact favorable policies, they must have some access to the levers of political power. The small farmer in the Northeast has never had this access.

Within Lambert's framework of a modern Brazil and an archaic one, he places the South in the former category and the Northeast in the latter. In the Northeast the subsistence farmer, the grower of food produce, has never had political power and has never been able to articulate his demands to the government for policies that would enhance his economic and social position. During the period of coronelismo, he was manipulated by rural political bosses and during the era of populism, he was ignored as politicians sought the votes and support of the urban masses. The small farmer has always been the marginal man in the politics of the Northeast. As a result, agricultural policies have not been designed for his benefit, and he remains a member of Lambert's archaic Brazil, operating within a traditional agricultural system that prevents him from improving his situation and hinders him in his competition with the modern agriculture of the South.

Novels and Newspapers as Sources of Information

The concluding comments of this introductory chapter deal

with two sources of information that are cited in this study: the works of Brazilian novelists and Bahian newspapers. Webb explains that the Brazilian regional novel provides geographic insights that can be acquired with great economy of effort and much aesthetic appreciation. He adds that the local newspaper is an often underutilized source of information that is a social document of great value to the area specialist in any field (253: 252-54). In the late 1920's and early 1930's, a national mood for reform in the Northeast was fostered by the social protest novels of José Lins do Rego, Jorge Amado, Graciliano Ramos, and José Americo (124: 63). Concerning their works, Castro writes:

Around their writings was a strong odor of life, a smell nauseating to people who lived in cleaner places. The novels of Graciliano Ramos, Jorge Amado, José Lins do Rego and others heralded the self-discovery of the Northeast and laid bare its painful realities. (48: 125)

Because of this important role played by Brazilian novelists, their works are of special interest. This is especially true in a study dealing with Salvador and Bahia, the sites of the romances of the great Jorge Amado (76: 2, 11).

Newspapers have been cited, because news items of almost daily occurrence during the course of this study dealt with such problems as food prices, market structures, agricultural development and the growth of Salvador. Moreover, newspaper archives provided the best source of information, along with personal interviews, concerning the fires which completely destroyed two

of Salvador's most important public markets in the 1960's. However, newspapers in Salvador, as newspapers throughout the world, often put a slant to the news. A brief sketch of each paper is therefore provided to enable the reader to allow for editorial bias.

Salvador's four daily newspapers are A Tarde, Tribuna da Bahia, Diário de Notícias, and Jornal da Bahia. A Tarde represents traditional Salvador. A conservative newspaper, it has the best reporting, the largest circulation, and the biggest impact on local elites. It is a local institution. Jorge Amado wrote in his tribute to A Tarde on the sixtieth anniversary of the paper's founding that it is the only newspaper referred to by its true name in his novels. "That's because A Tarde is something important that characterized and marks the city, as much an integral part of the city as the Elevador Lacerda, Igreja de São Francisco, Convento do Carmo, Forte do Mar, Farol da Barra, the Pelourinho, or the Mercado Modelo" (9). Tribuna de Bahia is a recently established newspaper attempting to build circulation through occasional use of sensationalism. It has no special bias. Diário de Notícias is a member of the Diários Associados chain founded by Assis Chateaubriand. It serves as a spokesman for the national, state, and city administrations with articles praising local and national governments, seldom criticizing them. The Jornal da Bahia is engaged in a bitter feud with the state administration, a vendetta that apparently stems from the paper's criticism in the late 1960's of the slum clearance policies of

Antonio Carlos Magalhães, then mayor of Salvador, now governor of Bahia. The Governor has withheld state advertising from the paper and reportedly pressured private concerns with government contracts to do the same; the Jornal da Bahia criticizes the state government at every opportunity.

CHAPTER II

PHYSICAL SETTING AND HISTORICAL BACKGROUND

Von Thünen listed several specific assumptions for his Isolated State: a large town was located in the center of a plain which had soil capable of cultivation and of equal fertility throughout; far from the town the plain became a wilderness which completely isolated the state from the rest of the world; there was a symbiotic relationship between the town and the countryside with the town providing the farmers with manufactured products and the countryside providing the urban dwellers with agricultural produce. Not one of these conditions is found in the reality of Salvador. The city, located on a peninsula, has never been isolated from the outside world, a factor which has profoundly affected the land-use pattern and prevented the development of the relationship between the city and its hinterland hypothesized by von Thünen.

One of the most important elements in Brazil's formation lies in the fact that the colony was established to provide certain commodities for the European market. This externally oriented objective was the purpose in establishing the Brazilian economy. "Everything was organized around this central aim; the structure and activities of the country are reflections of it"

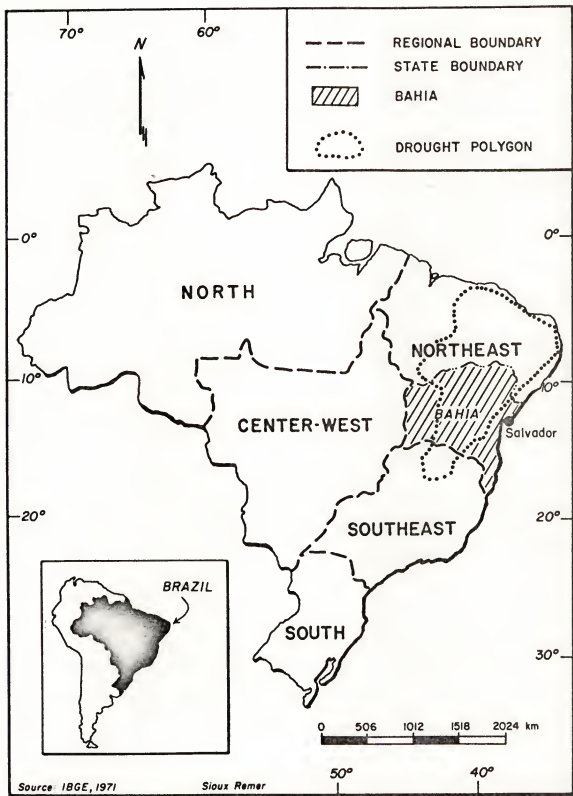
(184: 21). Von Thünen was acutely aware of the importance of historical development on agricultural patterns. He wrote that the farming system in the real world was "the piecemeal work of centuries and generations; it has become what it is by slow continuous improvements and constant adaptations to time and place" (120: 200). The purpose of this chapter is to describe the physical setting and historical development of Salvador and its hinterland, key elements in determining the location of present sources of food supply for the city.

Regions in Brazil

The division of an area into regions is always a difficult task, because none is completely homogeneous, and boundaries dividing one region from another are not sharp and precise lines but zones of transition. This difficulty in Brazil, at both the national and state level, has resulted in a variety of regional divisions over the years with alterations in the geographical units used as a statistical base and for program purposes.*

The Northeast has had several official boundaries in Brazilian history and is now composed of nine states: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, and Bahia. The Northeast, as now constituted, is a logical result of several government programs designed to assist

* For a comparison of the 1940 national regional divisions with those of 1969, see (108). For the government text establishing the 1969 regional divisions, see (172).



REGIONAL DIVISIONS OF BRAZIL

Figure 2

the area. The BNB was founded in 1952, and President Getulio Vargas defined the drought polygon to include the above nine states and part of Minas Gerais as the area for the bank's operations, revising previous polygon areas of 1936 and 1946. When SUDENE was created in 1959, it was assigned the same area as the BNB for its operations (193: 43). In the present regional division of Brazil established in 1969, the Northeast thus conforms to the area of responsibility of the region's two main development agencies. Bahia has not always been included in the Northeast region, because it is a transition zone between the north and the more developed states to the south. However, because one of the principal features of the Northeast is the drought polygon--a region of 950,000 square kilometers, more than 10 percent of the nation's area--Bahia's inclusion is well justified (249: 143-4). Slightly more than 57 percent of the state's area lies within this polygon, and 34 percent of the polygon is in Bahia.

Bahia, Brazil's sixth largest state with an area of 563,367 square kilometers (6.5 percent of the national territory), has had a series of regional divisions. In 1940 the Brazilian Institute of Geography and Statistics (IBGE) divided the state into sixteen micro-regions based on physical characteristics. In 1969 the IBGE changed the official divisions to twenty-six homogeneous micro-regions based on socioeconomic characteristics (228: 13-39). In the same year, the state government subdivided the state into sixteen "micro-regions for programs" to facilitate

designation of priority regions for SUDENE projects (84; 192: 124). The problem of regional divisions is very real for planners, program directors, and researchers. The state is too large and has such great physical, cultural, and economic diversity that it cannot be treated as a single unit. On the other hand, there are so many municipios, the basic administrative and political units, that a breakdown to this level is impracticable. Moreover, the boundaries of the municipios are constantly changing--in 1950, Bahia had 150 such units; in 1960, 194; and in 1970, 336.

In this dissertation the twenty-six homogeneous micro-regions defined by the IBGE have been used as the basis for subdividing the state. This choice was made, not because this scheme is better than that of the state government, but because the IBGE pattern was used as the basis for statistical groupings in the 1970 census. It is hoped that this design will continue to be used, in spite of its imperfections, in order to provide continuity of the statistical base (the Appendix contains a brief sketch of each micro-region).

Physical Setting

The Northeast

The Northeast is usually divided into three zones--the zona de mata or humid coastal zone, the caatinga or semi-arid interior, and the agreste, an intermediate and transitional zone

TABLE 1
MICRO-REGIONS OF BAHIA*

Region Number	Name of Region
131	Chapadões do Alto Rio Grande
132	Chapadões do Rio Corrente
133	Baixo-Médio São Francisco
134	Medio Sao Francisco
135	Chapada Diamantina Setentrional
136	Chapada Diamantina Meridional
137	Serra Geral da Bahia
138	Senhor do Bonfim
139	Piemonte da Diamantina
140	Corredeiras do São Francisco
141	Sertão de Canudos
142	Serrinha
143	Feira de Santana
144	Jequié
145	Planalto de Conquista
146	Pastoril de Itapetinga
147	Sertão de Paulo Afonso
148	Agreste de Alagoinhas
149	Litoral Norte Baiano
150	Salvador
151	Recôncavo Baiano
152	Tabuleiros de Valença
153	Encosta do Planalto de Conquista
154	Cacaueira
155	Interiorana do Extremo Sul da Bahia
156	Litoranea do Extremo Sul da Bahia

*Source: Sinopse preliminar do censo demografico: VIII recenseamento geral, 1970 (Bahia) (Rio de Janeiro: IBGE, 1971).

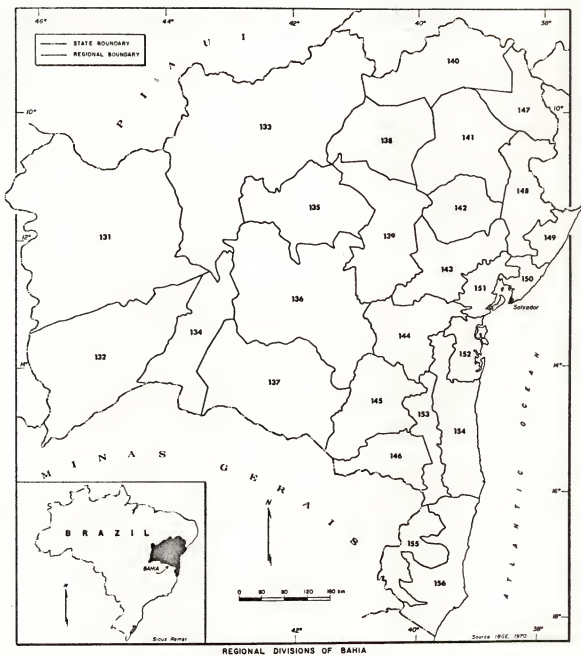


Figure 3

between the coast and the interior. Extending along almost the entire Northeastern coast is a humid strip that averages thirty to forty miles in width. This coastal zone has dependable and plentiful rainfall and was originally covered by a semi-deciduous forest which graded into a rain forest in southern Bahia. This zone has the red lateritic soils of seasonally humid tropical forests.

The semi-arid interior of the Northeast is approximately equal in size to the states of Texas and Oklahoma combined. This area is known as the caatinga, an Indian word meaning "white forest," a graphic description of the low, thorny, xerophytic vegetation during times of drought. Euclides da Cunha described the Northeastern backlands as "barbarously sterile, marvelously exuberant," and he wrote that

The traversing of the backland trails is then more exhausting than that of a barren steppe. In the latter case, the traveler at least has the relief of a broad horizon and free-sweeping plains.

The caatinga, on the other hand, stifles him; it cuts short his view, strikes him in the face, so to speak, and stuns him, enmeshes him in its spiny woof, and holds out no compensating attractions. It repulses him with its thorns and prickly leaves, its twigs sharp as lances; and it stretches out in front of him, for mile on mile, unchanging in its desolate aspect of leafless trees, of dried and twisted boughs, a turbulent maze of vegetation standing rigidly in space or spreading out sinuously along the ground, representing, as it would seem, the agonized struggles of a tortured, writhing flora.

(70: 39-40)

The precipitation in this zone is sufficient in normal

times to permit human existence, even though it may be on a precarious basis. The real problem is not the lack of rainfall but of rainfall irregularity. Because of wide variations in rainfall, floods or droughts were recorded in certain parts of the caatinga more than sixty times between 1835 and 1970. Inhabitable, although inhospitable, during years of normal rainfall, the caatinga becomes a virtual desert in times of drought. Rain in the coastal and transitional zones is borne on winds from the south-east, but the interior has summer rainfall coming on winds from the northeast. The eastern edge of the indraft extends farther and farther eastward as the rainy season (January-May) progresses. If the eastern edge moves far to the east, the result is heavy rains and floods; if it fails to move past São Luis, Maranhão, the result is drought. No way to predict these irregularities has been discovered (105: 143, 152; 135: 393-96; 100; 37; 161). The agreste is commonly called the transition zone between the humid coastal region and the semi-arid interior. But, as Webb points out, calling it simply a transition zone "does not illuminate the myriad of interesting aspects that give it its distinctive character." Annual rainfall ranges from 800 to 1,200 millimeters; the soils are thinner and sandier than on the coast; and the agreste originally had a natural vegetation between a mata seca (dry forest) and caatinga (251: 222).

Salvador and the Recôncavo

Costa Pinto describes Bahia's geography as descending "in

great steps with gentle slope until it reaches the sea, converging from several directions and forming a vast telluric amphitheater around the geographic and historic epicenter that is the great gulf" (64: 8). Two factors have worked for the regional unity of the Re[^]concavo--the city of Salvador and the Bahia de Todos os Santos. This area historically was one of the most important in Brazil, and as industrialization is introduced into the region under the auspices of SUDENE, it bids fair again to become one of Brazil's important economic zones. Agriculture, the primary source of wealth in colonial times, has been strongly influenced by the area's physical features.

In Portuguese the word "re[^]concavo" means the inside of a curve or circle and in Brazil has long been used to describe the lands surrounding the magnificent Bahia de Todos os Santos, a vast bay of tectonic origin, 200 kilometers in circumference and 1,052 square kilometers in area. As Santos and Erdens point out, the Re[^]concavo has always been more a historic concept than a physiographic unity (214: 4). From the geomorphologic point of view, the Re[^]concavo results from a drowned coast and river mouths that formed the bay. The structural framework is made up of three elements: to the west, the crystalline base of the dorsal running from Feira de Santana to Cruz das Almas with altitudes of about 200 meters and relief dominated by inselbergs, which are more plentiful toward the south; the center, consisting of the bay and the lowlands that border it toward the south, a cretaceous strip which also has formed the many islands within

the bay, principally Itaparica; to the east, another outcrop of the crystalline base that terminates in a point, the horst of Salvador. The bay appears to be the result of fairly recent tectonic movements causing the lowering of a large block of the earth's crust, with subsequent invasion by the sea, with fault lines running through the present city of Salvador to the east and near the city of Maragogipe to the west. If differential erosion had formed the bay, there would be a much more important and pronounced drainage pattern than now exists (245: 121-24; 21: 143-47).

Salvador, among the great cities of Brazil, has the greatest problems of urban space and external and internal circulation in relation to the size of its population and its potential for growth. It is a city of scarps, hills, ridges, and valleys where level spaces are extremely rare. There are four topographic elements present in Salvador: the narrow and flat lowland of the lower city which lies between the bay and the escarpment; the escarpment of the fault line of Salvador with an altitude of sixty to eighty meters and an extension of more than twenty kilometers in a SSW-NNE direction; the narrow top of the escarpment, site of the upper city; and the distinct hills, ridges, and valleys on the reverse of the escarpment which have been caused by the drainage pattern out of the slope of the fault block by the upper Rio Vermelho, a course of water that subdivides the massif of Salvador as it seeks the Atlantic Ocean (245: 124; 2: 61-63). The topography of the city has had, and continues to

have, an important influence on the system of food supply and distribution.

Historical Background

Salvador

Salvador was founded by Brazil's first Governor General, Tome de Sousa, who arrived in the Bahia de Todos os Santos in March, 1549 with six ships and 1,000 men. It remained the colonial capital until 1763, when the seat of government was transferred to Rio de Janeiro. The initial functions of the city were political, administrative, and military, and the site selected was ideal for these purposes. Located at almost the mid-point of Brazil's coast, the city had the locational advantage of centrality to carry out the task of being a center of unity to assist the captaincies, the basic units of colonization. Between 1530 and 1535, Brazil had been divided into fifteen captaincies, each consisting of from fifty to sixty leagues of coastline with an indefinite extension into the unexplored interior. The creation of the position of Governor General in 1548 and the founding of Salvador the following year were acts designed to provide a focal point of coordination for these Brazilian colonies (157: 10-12; 248, Vol. I: 62-82; 221: 629).

The city founders constructed the city on the top of the escarpment because of the great advantage of military defense against Indian forays by land and French, Dutch, and English

ships attacking by sea.* For its initial functions, the site was perfect with the advantages of a defensible position located on a marvelous port. Since its founding, however, the city's functions have gradually changed: first, to a great commercial center exporting agricultural crops and importing a wide variety of goods for use within the city and for redistribution to an ever-expanding hinterland; more recently to one of the major industrial centers of the nation (209: 21). Physical advantages for the original purpose of the city have proved serious obstacles to development as these functions have changed.

Built on a fault line, the city has had two basic divisions since its founding--the upper city (cidade alta), a residential area and site of administrative operations for state and municipal government, and a lower city (cidade baixa), the location for port and commercial activities. Physical limitations to expansion in both levels have always resulted in congestion and transportation difficulties; the separation of the two cities by the escarpment was excellent for defense purposes but has been a constant barrier to intercity communication.

* Salvador was captured by the Dutch in May, 1624 and retaken by the Portuguese in April, 1625. In both instances, the city fell because of the incompetence of the defenders, not because of the lack of a defensible position. The Portuguese realized "that if the Dutch established themselves firmly at Bahia, the loss of the rest of Brazil would surely follow." After regaining control of Salvador, the Portuguese strengthened its fortifications. This dissuaded the Dutch from making a second attempt to establish themselves in Bahia. Instead they successfully attacked Olinda and Recife to the north in February, 1630 where they remained until driven out in January, 1654 (34: 21-31).

Visitors to Salvador in the last century were not impressed. Scully wrote that the lower city was "built on the narrow ribbon of low, flat ground lying at the foot of the hill, much of it close, filthy, and dilapidated" (222: 349). Fletcher and Kidder noted that "The lower town is not calculated to make a favorable impression upon the stranger. . . . The streets in this vicinity are very narrow, uneven and wretchedly paved, and at times as filthy as those of New York" (94: 475). The cleanliness of the lower city has undoubtedly improved considerably over the years. The congestion is as bad, or worse, leading local wags to comment that in the lower city automobiles park on the sidewalks and people walk in the streets.

Increased traffic congestion in recent years has been caused by a spurt in population growth, greater reliance on automobiles, and improved communication methods between the upper and lower city. Until 1940 Salvador's population was doubling about every fifty years; recently it has been almost doubling every ten years (46: 17). The 1970 census reported a total population of 1,007,744. This increased population has caused vertical growth throughout the city as well as horizontal growth in the development of a linear city in both upper and lower levels. In addition to increased population, changing methods of transportation within Salvador have added to the problems of movement in the lower city.

The first inhabitants of the city did not attempt to excavate roads of gentle slope along the face of the scarp but

relied on steeply inclined paths and a crude system of elevators to move people and goods from one level to the other (43: 116-17). Improvements on this initial system were primarily in the utilization of more advanced technology in the elevator system and the construction of inclined planes for cable cars. The keystone of the system was the Lacerda Elevator, Salvador's Eiffel Tower, named for the engineer Antonio de Lacerda who designed the original which was inaugurated in 1872. The Lacerda was changed from hydraulic to electric power in 1930, and further improvements were added in 1961 permitting a carrying capacity of thirty-two passengers in each of its four cars. The vital importance of mechanical devices as intercity linkages is demonstrated by the fact that in 1962, 43,229,041 passengers used the elevators and inclined planes--27,664,101 in the Lacerda alone. By 1971 total traffic declined to 24,194,276 passengers, with 15, 576,495 using the Lacerda in that year.* The declining use of elevators and inclined planes since 1962, during a period when the city's population increased by about 500,000, is not an indication of decreased importance of the lower city but rather of a revolution in transportation methods. Roads with only slight inclines have been constructed down the face of the scarp and tunnels bored through it, enabling greatly increased traffic by bus and automobile direct to the lower city.

The importance of these changes to the city's pattern of

* Statistics provided in an interview with SMTC officials in August, 1972.

food supply and distribution will be discussed in a later chapter. It should be pointed out here, however, that the lower city has historically been the location for the major wholesale and retail food markets, because most food was brought to the city by small boats from different regions within the Reconcavo. The demand for space to accommodate the greatly increased traffic in the lower city is gradually forcing public markets from this area. On March 15, 1973, a government-sponsored fresh-produce wholesale center (CEASA/BA) was inaugurated outside the city limits. This center is designed to perform the wholesale functions traditionally carried out by the public markets.

Several factors have influenced Salvador's recent industrialization. Perhaps the most important is found in the fiscal incentives offered under the SUDENE program to encourage investment in the Northeast as a spur to balanced regional development. Table 2 relates some basic background on this investment. In addition to the financial advantages provided by article 34/18 of the SUDENE statute, the investors listed in Table 2 received permits to import, without tax, material required to establish their industry; six of the twenty-one firms in Bahia received a complete income tax exemption for a ten-year period; and seven of the twenty-one firms received a 50 percent exemption on income taxes until 1978 (194: 7-9).

A second inducement to the establishment of industry in Bahia is the infrastructure provided by local government. The Industrial Center of Aratu (CIA) was created by state law in



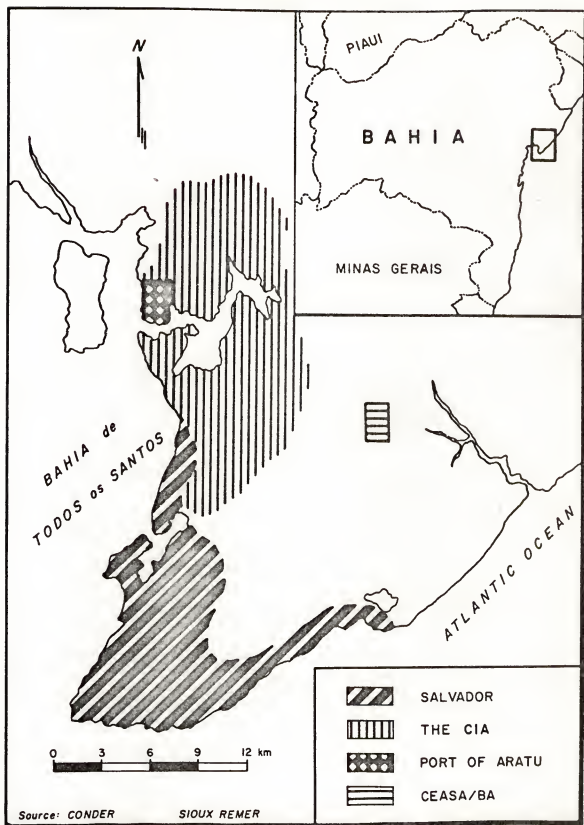
Figure 4. The Lacerda Elevator.

TABLE 2
INDUSTRIAL PROJECTS APPROVED BY SUDENE: 1971

State	Number of Industries	%	Direct Jobs Created		Investment in Cr \$1,000	
				%		%
Bahia	21	19.5	1,994	15.9	707,347	40.3
Pernambuco	31	28.7	3,208	25.6	363,869	20.8
Others	<u>56</u>	<u>51.8</u>	<u>7,321</u>	<u>58.5</u>	<u>681,002</u>	<u>38.9</u>
Northeast	108	100.0	12,523	100.0	1,752,218	100.0

*Source: Relatorio de Governo, 1971 (Salvador: Imprensa Oficial da Bahia, 1972).

1967 and \$21.3 million dollars have been spent for paving, electricity, and other facilities in this major industrial park. Linked with the CIA is the construction of the new port of Aratu which is scheduled for completion in 1974. This port, with a total price tag of \$27 million dollars (\$17 million from the state government), will be able to handle 12 million tons of cargo per year when completed (81; 139; 55). A third advantage for industrial location in Bahia is the proximity of petroleum deposits, first discovered in the northern portion of the Recôncavo in January, 1939. Of the 9.9 million cubic meters of crude oil produced in 1971, 8.1 million came from the oil fields in Bahia and 1.8 million from the fields to the north, in the states of Alagoas and Sergipe. A major petro-chemical complex will be established in Bahia, with the backing of the national government, because of the proven oil reserves in the Recôncavo.



SALVADOR, THE CIA, PORT OF ARATU, & CEASA/BA

Figure 5

A final advantage of investment in Salvador is the city's location, one of the advantages that led to its selection as the capital more than 400 years ago. As the capital of the southernmost state of the Northeast region, Salvador is closest to the vast market for manufactured goods represented by the states to the south.

Industrialization in Bahia is being brought about in part because of the special advantages offered by the region. The majority of the investments come from the South and represent an extension of the São Paulo-Rio industrial axis. The final market for the new industrial units is not the local and regional market, but the Southeast. Because goods produced must be competitive in the national and foreign markets, new industries in Bahia use modern technology and opt for capital-intensive operations rather than those that are labor intensive; traditional industries that were labor intensive and had long been established in Salvador are finding it increasingly difficult to stay in business because of the more technologically advanced firms moving into the area. Bahia received more than 40 percent of investment capital under SUDENE programs in 1971, but of the total direct jobs generated by this investment, the state received only about 16 percent. This imbalance is caused by heavy investment in Salvador in non-consumer goods industries: 49.6 percent of the investments were in industries producing capital goods; 43.5 percent in industries producing intermediary goods; and 6.9 percent for the production of consumer goods.

The state government is aware of the difficulties and paradoxes contained in its drive for industrialization but contends that "The truth is that there was no other rapid solution to industrializing the Northeast than in transforming it, in this first stage, into a discontinuous 'frontier' of the São Paulo-Rio metropolitan axis" (189: 101). The policy of the state government has been taken with the intention of bringing development and progress to Bahia. But it is a policy that is open to criticism when consideration is given to Furtado's statement that industrialization without development of the food-producing sector is impracticable and if the policy was adopted on the false assumption that modernization in the industrial sector will automatically cause modernization in the agricultural sector. Criticism of the policy also stems from the tremendous effort and expense devoted to industrialization in comparison with the efforts in the agricultural sector, especially that of food production, and the relatively low number of direct jobs created through the industrialization effort in an area where unemployment, underemployment, and the creation of a mass market for consumer goods are crucial problems to be solved before economic and social development can be achieved.

The Sugar Economy

During its early days as a colony, the Portuguese hoped that Brazil would produce large quantities of instant wealth as had the Spanish conquest of the Inca and Aztec empires. Failing

in their initial quest to find large stores of treasure in the form of gold and silver, the Portuguese adopted a deliberate policy of developing a sugar industry along the northeastern coast of Brazil in an effort to establish a profitable trade to satisfy the expanding demand for sugar in Europe.

The rapid development of the sugar industry in Brazil, in spite of the serious difficulties caused by the physical environment, hostile Indians, and high freight rates, is a clear indication that the efforts of the Portuguese government had been concentrated on that sector. "The privilege bestowed on the grantee, whereby he received exclusive rights to manufacture cane crushers and water mills, reveals that the specific purpose was to develop sugar cane farming in the colony" (104: 43).

Sugar was king--an absolute monarch. Land-use policy was determined by this single overriding objective dictated from Lisbon. Because Portugal sought maximization of profit from exporting sugar, all other considerations of agricultural location became subordinated to this basic policy objective. Thus, the initial locations of agricultural activities were not determined by competing interests striving to serve and supply the urban center, Salvador, but found their base of operation as a direct result of their relationship to the export crop that became the reason for being of the colony. Other agricultural activities in Salvador's hinterland--forests, tobacco, food crops, cattle grazing--arranged themselves into areas dictated not by relationships to the city, as in von Thünen's Isolated State, but in

accordance with their relationships to sugar production.

The deliberate development of a sugar cane economy in the humid coastal zone, especially around Recife and Salvador, has had profound and lasting effects on the Northeast region that are still present today. The sugar cane economy has not only strongly influenced the location of agricultural activities, but also the way of life generated by the sugar cane plantation has become imbedded in many aspects of society and has been an important factor in the political, economic, and social development of the region.

The owner and absolute ruler of the sugar plantation was the senhor de engenho, a title which became a symbol of wealth and later of nobility. The senhor de engenho dominated Bahia, both socially and politically, for several centuries (130: 36-37). Freyre observes that early in the development of the Northeast "The engenho de açúcar, the sugar mill, became the basis of the economy and a continuous historical prototype for an extensive system of organizing the economy, the family, the society, and culture." He declares that "Few Egyptian pharaohs exceeded the untrammelled power and authority of these senhores de engenho in the sixteenth, seventeenth, eighteenth centuries and even into the nineteenth century. Even the power of great kings pales beside their total fiat" (103: 36-37).

With the abolition of slavery in 1889, some changes were brought about in the traditional family-owned plantation system. However, because by this time the sugar produced in the Northeast

was consumed within Brazil itself, in a protected market, the cane growers were not forced to undertake the drastic structural changes that would have been forced upon them by competition in the world market. The transition to modern methods was far from complete. Although family-owned plantations continued to exist, they did have internal competition from usinas, corporately owned sugar-producing facilities. The usina is under corporate management and is a factory in the field. With the introduction of the usina, great emphasis was placed on improved milling techniques, better refining practices, and perfection of the finished product by the central mill. But the agricultural methods remained relatively unchanged. Social patterns were gradually altered, and the old paternalistic relationship between workers and owners slowly deteriorated as impersonal mill managers replaced plantation owners. No new social and economic institutions developed to provide the workers with the security provided by the patriarchal system, and they found themselves groping for a new and satisfactory form of organization.

The Cattle Economy

While the development of the coastal zone was based on sugar cane, the development of the interior centered on cattle breeding. The demand for draft animals for hauling cane and firewood to the sugar mills and the demand for meat for consumption in the coastal settlements caused the growth of a cattle industry in a direct, but subordinate, relationship to the

coastal sugar complex. As on the coast, large land holdings were the rule in the sertão, and most of the area was soon carved into vast cattle ranches which served not only the coastal plantations and the growing port cities of Recife and Salvador but also, at a later date, the booming mining camps in Minas Gerais.

A way of life completely different from that of the coast developed in the harsh Northeastern backlands, the sertão. The novelist João Guimarães Rosa imparts some of the flavor of this life: "The sertão describes itself--it is where the grazing lands have no fences; where you can keep going ten, fifteen leagues without coming upon a single house; where a criminal can safely hide out, beyond the rule of authorities. . . . The sertão is where the strong and the shrewd call the tune. God himself, when he comes here, had better come armed. . . . The sertão is where a man must have a stiff neck and a hard fist" (200: 4, 13, 91).*

The way of life, the economic base, and the physical environment differ greatly from the coastal zone to the semi-arid interior, but the two areas had one important element in common--the concentration of power in the hands of a small elite. The *senhor de engenho* was the titan in the coastal zone; the poderoso do sertao, or coronel, reigned supreme in the backlands. Owners

*Rosa's novels deal with the life in the sertão of Minas Gerais, but Jorge Amado considers him a Bahian writer, because that area of Minas which Rosa describes was largely settled by Bahianos moving south along the course of the São Francisco River. See Amado's introduction to the cited work.

of vast ranches, commanding a large group of cowboys that served double duty as ranch hands and fighters in a private army, the coroneis ruled areas that were practically independent fiefdoms.

Early in Brazil's colonial history, the governors were faced with the problem of controlling the powerful landowners who were almost completely independent of the royal authority. These landowners were avid for titles, honor, and military rank for reasons both of power and prestige, and the regional governors advised the crown that the bestowing of honorific titles was the most efficient and cheapest method of assuring their loyalty. Antonio de Albuquerque, Governor of Rio de Janeiro, began this practice by giving the titles of Brigadier General and Colonel to the Paulista leaders and the chiefs of the Portuguese immigrant factions warring over the gold fields in Minas Gerais. "Although the crown considered that he went too far in this respect, the practice was continued by his successors, and the 'colonel' who never served in the army is a familiar figure in the Brazilian countryside today, where he exercises, overtly or otherwise, a power corresponding to that of the old-style North American 'bosses'" (33: 308). Coronelismo, begun during the colonial period, proved to be one of Brazil's most durable institutions. It survived the Empire, the First Republic, and the Vargas period, and is still present in the Northeast today, although its power and influence have been greatly reduced.

The Recôncavo

The Recôncavo, the region that occupies the land around the bay, has historically been an important area in Brazilian life. An International Development Bank report, published in 1970, found the region in a sad state of stagnation:

The Recôncavo presents all the characteristics of underdeveloped regions: serious problems of unemployment, badly utilized resources, concentration of ownership of land, insufficient food, agriculture of low productivity, high indexes of mortality and infectious diseases, dependency on external markets, tremendous social inequalities; limited and incomplete industrialization, low sanitary levels, low educational levels with a high degree of illiteracy, high population growth, strong tendency toward urbanization, shortage of services and insufficiency of infrastructure. (85: 3)

This gloomy litany describes a region that once was one of the most important sources of Brazilian wealth. To understand its present situation, it is necessary to review briefly the area's historical development.

Two basic factors underlie the development of Salvador and its immediate hinterland, the Recôncavo. The first is the vast bay and the rivers flowing into it, especially the Jaguaripe and the Paraguassu. Water was the linkage in forming a geographic region of this area by providing a vast natural highway for transportation and communication. The bay served as a uniting element for the entire region for centuries, but the revolution in transportation methods of the last thirty years has changed the bay from that of a uniting element to that of a

dividing one, from a facilitator of transportation and communication to a barrier to the flow of cargo and people.

The second basic factor in the region's development was sugar production. The importance of sugar in the development of the Northeast has been discussed; its role in the Recôncavo was overwhelming. Initially, sugar cane was planted throughout the entire Recôncavo. Cultivation required firewood for use as fuel in the mills and a method of transporting the finished product. The quality of the soil was not a major factor in early production and only in later years, when production methods changed and competition, both internal and external, increased, did the sugar zone contract to the massape soils most suitable for cane cultivation. Initially, the sugar zone consisted of the entire Recôncavo, right up to the city limits of Salvador and including the islands in the bay (101: 41; 176: 154).

During the entire colonial period, up until 1822, the total value of Brazil's exports was 536 million pounds sterling; sugar accounted for 300 million with most of the remainder made up of the 170 million value of gold from the fields of Minas Gerais. Bahia was the leading producer during much of this period; for example, in 1820 Rio de Janeiro exported 9,000 boxes; São Paulo, 1,000; Pernambuco, 14,000; and Bahia, 20,000 (14, Vol II: 82-86). The increased competition in sugar production and the improved milling technology represented by the shift from engenhos to usinas forced a gradual reduction of the sugar zone to the massape soils in the north of the Recôncavo. Other

agricultural pursuits received their location in accord with their relationship to sugar, tobacco in the tablelands in the northwest of the region, and subsistence crops in the southwest. The former early gained a close relationship with sugar; tobacco was used as a medium of exchange to purchase slaves who provided the labor supply on the engenhos. Subsistence crops were relegated to land found unsuitable for either tobacco or sugar cane and, although found in patches throughout the Recôncavo, were concentrated in the southwestern region.

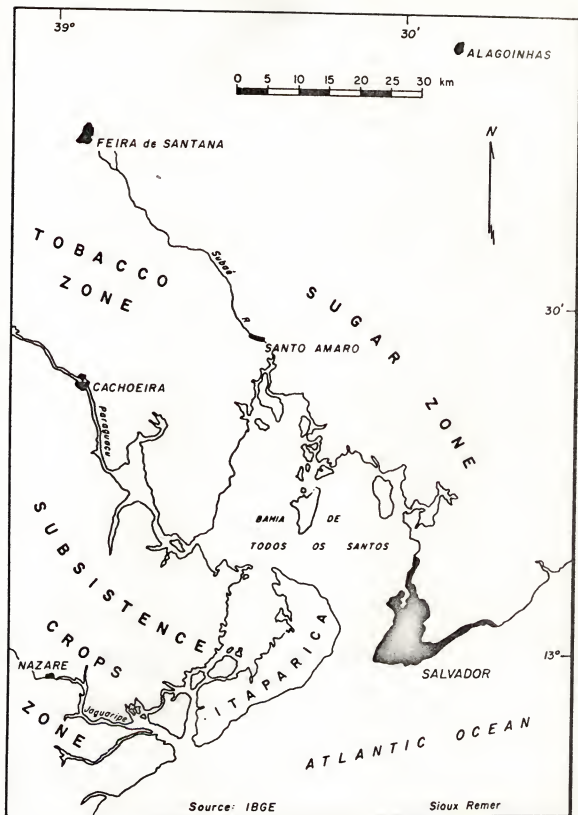
The location of commercial and food crops and the reliance on water as the basic means of transportation were decisive elements in the formation of a dense population in the Recôncavo and the growth of its complex network of towns and cities. Santos describes three generations of cities within the Recôncavo (210: 20).^{*} The first generations of cities were those built around the margin of the bay with the primary purpose of military defense against hostile Indians and the raids of Portugal's European rivals. These cities included Janguaripe and São Francisco do Conde. As the Indians were pacified or driven back into the sertão, a second generation of cities devoted to commercial ties with Salvador came into being. These cities were built on the fall line of the major rivers flowing into the bay; there were three major urban centers, and each became a subregional capital

^{*} Other geographic studies on cities in the Recôncavo include two on Nazare (61; 213) and one on Santo Amaro (60).

of an agricultural zone. Santo Amaro was capital of the sugar zone; Cachoeira, capital of the tobacco zone; and Nazare, capital of the subsistence crops subregion. From each of these cities, railroads were constructed back into the interior during the nineteenth century.

The railroads had no connections with each other, and their operation was an important factor in the growth of the river port cities where cargo was unloaded and shipped by water to Salvador. This method of constructing railroads from port cities back to the interior with few, if any, routes connecting the different lines was common in Brazil during the period of her railroad boom and is discussed in more detail in the chapter on transportation. Networks of this kind served as a stimulus to the growth of the port cities but in the long run proved to be the cause of major difficiencies in the national and regional transportation systems. With the transportation revolution in Brazil in the last twenty years, brought about by highways and diesel trucks, the railroad centers have gone into a period of marked decline and given rise to the third generation of cities in the Recôncavo, Feira de Santana and Alagoinhas.* Of these the most important is Feira de Santana, whose urban population has soared from 14,131 in 1940 to 120,920 in 1970. Both of these cities are in the transition zone between the humid coast

* An excellent history of Feira de Santana has been written by Poppino (183). In 1968 the Federal University of Bahia (UFBA) published a concise study of Alagoinhas (59).



THE RECÔNCAVO

Figure 6

and the semi-arid interior. Feira de Santana began as a cattle center around 1650 when the cattle industry was banned from the coastal zone. By 1828 it had become the site of the largest cattle fair in Bahia, with extensive pastures for fattening cattle brought in from the backlands. The extension of highways and the increased use of trucks have decreased Feira de Santana's importance as a cattle center but vastly increased its importance as a transportation center. This city is now one of the most important highway junctions of the entire Northeast, and its recent growth stems directly from this locational advantage.

The Municipio of Nazare

Of special interest to this study is the growth and decline of one of the second-generation cities, Nazare, which once played the role of "the capital of supply for Salvador" (210: 35). The area that now consists of the municipio was settled by colonists moving up the Jaguaripe River in the late sixteenth and early seventeenth centuries. A sugar mill initially occupied the site where the city of Nazare now stands, so named in 1649, because several settlers believed they had seen the Virgin of Nazareth walking along the river bank in the vicinity of the town.

Although officially named Nazare, the town is popularly known as Nazare das Farinhas because of the great quantity and high quality farinha de mandioca produced in the area. Early colonists concentrated on the cultivation of sugar cane, as in

the rest of the Recôncavo, and some primitive engenhos are still in operation producing crudely refined sugar and aguardente. Subsistence crops were also grown, and the town grew and prospered as an exporter of food products from the surrounding territory to Salvador and the rest of the Recôncavo. In 1831 the area was formed into a município, separating it from that of Jaguaripe whose municipal seat had been one of the first-generation urban centers in the Recôncavo (82, Vol. XXI: 76).

Nazare's most important period of growth began in 1863 when construction commenced on the "Tram Road a Vapor de Nazare." Railroad service to the west to Santo Antonio de Jesus began in 1880; from this point the line turned south, reaching Laje in 1901, Areia in 1906, Jaguaguara in 1914, and the terminal city, Jequié, in 1927. The city became an important commercial center receiving food products and commercial crops for transshipment to Salvador by water and distributing manufactured goods received from Salvador to a considerable hinterland. Because the administrative offices and repair shops of the Tram Road were located in Nazare, the city's commercial activity was also stimulated by the permanent presence of these railroad personnel.

With the advent of improved highways and the trucking industry, Nazare entered a period of decline in the 1940's, and rail traffic to the city was completely abandoned in 1969. Thirty years ago the urban population of Feira de Santana and Nazare were both about 14,000; in 1970 Feira de Santana had more than 120,000 inhabitants, while Nazare had 16,285. Once

a major source of food supplies for Salvador, the area's agricultural development has been sluggish, and even the production of its famed farinha de mandioca declined from 35,600 tons in 1955 to 18,900 in 1970.*

Both the urban and rural sectors of Nazare are caught in a vicious circle. The local economy, crippled by the death of the railroad and a marked decrease in port activity, finds it difficult to recover. The urban commercial sector declines for two reasons: the agricultural sector is too poor to create a demand, and many urbanites find it more pleasant, and more profitable, to do a portion of their purchasing in Salvador, because state-subsidized passenger launch service to the state capital is relatively cheap. The agricultural sector is squeezed, because its local market is directly linked to the downward trend in the local economy, and its importance to the Salvador market continues to decrease because of competition from other areas, some outside of the state. Ferry boat service was inaugurated between Salvador and Bon Despacho on Itaparica in early 1973. Local boosters hope that this will prove to be a major stimulus to Nazare's economy, because the existing road between Nazare and Bon Despacho permits vehicular traffic to move rapidly to

*Statistics provided in an interview with DEE officials in September, 1972. The DEE collects production data on commercial crops and some food crops for each municipio in Bahia and compiles these data in an annual report. These reports are used by government agencies, and copies are retained on file in the DEE office in Salvador.

the state capital. It also makes it easier for the people of Nazare to shop in Salvador; the ferry boat could well be a bane instead of a boon unless steps are taken to enable the long-neglected agricultural sector to profit from better truck transportation of produce that is now available.

The decline of Nazare is of concern to Salvador because of its relationship to the problem of food supply. It is also of concern because of its relationship to the serious problem of rural-urban migration. That Bahianos are migrating, there can be no doubt. A recent study shows that almost 20 percent of the 1,808,634 migrants to the city of São Paulo during the 1950-1970 period came from the state of Bahia (160: 87). Data available indicate that Salvador receives most of the migrants from the Recôncavo; those in the semi-arid interior move to São Paulo or Rio de Janeiro. A 1961 survey of 262 migrants in a Salvador slum showed that more than 80 percent came from within 200 kilometers of the city and that 66 percent had migrated in search of employment (29: 3-5). A 1959 review of the voting registration applications of 6,177 new adult residents revealed that 40.72 percent came from the Recôncavo. This study analyzed one of the poorer areas of the city, and the results showed that more than 75 percent of the employed migrants were working in the tertiary sector (208: 128-129). Studies in 1969 of several cities in the Recôncavo indicated that Salvador was the major pole of attraction for those departing these areas to establish residence elsewhere (167: 118).

Salvador will continue to attract migrants from the countryside because of the amenities and opportunities that exist in this urban center. However, by improving the lot of the small farmer, the number driven from the land to urban slums because rural life is impossible would be reduced and, at the same time, Salvador's food supply would be augmented.

CHAPTER III

FOOD FOR SALVADOR: PAST AND PRESENT

According to the scheme developed by von Thünen, the agricultural land immediately around a city would be devoted to food products such as cauliflower, lettuce, potatoes, cabbages, and strawberries. Von Thünen reasoned that these crops would yield the highest net return and would, therefore, displace other crops to areas more distant from the city. This reasoning was logical, given von Thünen's assumption that the town was completely isolated from the outside world and that agricultural production would be dedicated to supplying the needs of the town.

In the reality of Salvador, the assumption that the crop yielding the highest net return would displace all others certainly held true. However, because Salvador was a colony of Portugal and not isolated from the outside world, the most valuable crop in the externally oriented colonial economy was sugar cane, not horticultural products. Land-use patterns developed in response to the demands of the European market, not to the needs of Salvador. The agricultural pattern that was established in colonial times has proved remarkably resistant to change and still influences the location of areas that produce food for Salvador.

Past Sources of Food Supply

Almost since its founding more than 400 years ago, Salvador has had problems in maintaining an adequate food supply for its urban population. The problem remains today. Acts and decrees of the colonial legislature to increase food supply have been replaced by newspaper articles decrying the scarcity and high prices of food products.* An early attempt to establish a central storage outlet for farinha finds its modern counterpart in a government-sponsored wholesale center for fruits and vegetables. The causes for today's food problems stem, in part, from the factors that created these same problems during the city's earliest days.

The colonial capital has long been surrounded by commercial crops. Anna Carvalho summed up the situation when she wrote:

The speculative utilization of space began immediately after the limits of the urban agglomeration, not for the use of the city but for interests linked to international commerce. Salvador found itself an island--isolated from the interior by commercial crops, supplied from within the city itself or by sea.** (44: 8)

Freyre described the food problem during the city's early years

* During the period of field research for this dissertation, newspapers in Salvador frequently criticized rising food costs (42; 114; 185; 246).

** An earlier article by Carvalho on this same subject was published in 1961 (45).

by saying that "So great was the neglect of any other crop than sugar or tobacco throughout the agricultural zone that eighteenth-century Bahia, with all its show of luxury, came to suffer an extraordinary lack of flour (*farinha*)" (102: 55).*

Faced with the problem of feeding itself, Salvador developed two areas of food supply that lasted for centuries: the first was within the limits of the city itself; the second was located in different areas of the Recôncavo, especially the southwest region with Nazare as the subregional capital. These areas became major food supply zones, because they were discarded by commercial agricultural interests as being ill-suited for sugar or tobacco. Food crops were relegated to the least valuable agricultural land because of the influence of foreign commercial interests on land-use patterns. Salvador does not have now, nor has it ever had, a distinct and extensive green belt around the city devoted to the production of food products.

The topography of the city gave rise to the development of a source of food crops within the city itself. For purposes of defense the city was founded on the top of the escarpment; it grew in a linear fashion along the top of the scarp and higher ridgelines. On the reverse of the scarp, toward the Atlantic Ocean, were a series of ridges, hills, knobs, and valleys. The land in the valleys was left uninhabited partly because the land

* Others who have commented on the adverse effect of monoculture on food supplies in the Northeast include Castro (49) and Rosa e Silva (199).

was more difficult to defend, partly because the lowlands did not receive cooling sea breezes, and partly because access to the main part of the city on the scarp was difficult from the valleys. Because these areas were undesirable for urban expansion and for commercial crops, they were gradually developed into productive garden plots producing a wide variety of food products sold door-to-door or in the city's markets.

For more than four centuries these valleys made an important contribution to Salvador's food supply. By the end of the 1950's, however, they had been almost completely eliminated because of the pressure of urban expansion (152: 3). The former garden areas have not been taken over so much by residential areas and office buildings as by highways and access roads designed to provide transportation to both upper and lower cities from Salvador's rapidly expanding suburban areas. The city's population growth has caused an increased demand for food production and also has practically eliminated one of the traditional sources of supply.

The second major area of food production for Salvador was found in different areas throughout the Reconcavo where subsistence crops were grown on land found unsuitable for sugar or tobacco. Subsistence agriculture was concentrated along the Jaguaripe valley with Nazare serving as the supply capital for Salvador. Food was grown on small holdings, sold to middlemen at local weekly fairs, and shipped on saveiros to the major markets in Salvador's lower city. This second supply area is

rapidly declining in importance for several reasons. Production and local commercialization techniques remain primitive; the transportation revolution has brought competition from distant producing areas; the saveiro, as a means of transportation, is becoming obsolete because of competition from trucks; and water-front markets in the lower city are being eliminated as a result of city expansion.

Almeida has written that the internal demand for agricultural products was practically nonexistent during the colonial period in Bahia, because 90 percent of the colonial population lived in the countryside (6: 7-8). This statement is of doubtful validity. Producers of export crops tended to plant as much land as possible with the crop that was most profitable at the moment, sugar or tobacco, to the exclusion of food crops. Those living in the countryside on commercial plantations were often as dependent on outside sources of food as the urban residents of Salvador. The attitude of the powerful plantation owners is represented by the statement of senhor de engenho Manoel Ferreira da Camara.

I sustain more than 250 people; their sustenance costs me, according to present prices of farinha, between thirty-six and forty thousand reis each week. And I will not plant one single root of mandioca in order to not fall into the absurd situation of giving up the best crop in this country for the worst that exists. (22: 324)

Castro described this situation when he wrote:

The planters were more jealous of their lands than of their women. They thought it would be

wasteful to squander their fields by giving them over to crops of Indian or Negro origin, such as manioc, corn, peanuts, or beans, rather than the "noble" (and more profitable) cane. (48: 34)

The chronic food shortages of colonial times in Bahia are evidenced by the series of royal edicts and legislative decrees which repeatedly appeared in efforts to increase food supplies. In 1635 the colonial legislature attempted to prohibit the planting of tobacco because of a shortage of farinha de mandioca; in 1686 the legislature requested the crown to order all sugar and tobacco growers to also plant mandioca; on becoming Governor General in 1690, one of the first acts of Antonio Luiz Gonçalves de Camara Coutinho was to order that all persons living within ten leagues of Salvador were obliged to plant 500 covas of mandioca; a municipal decree of September 7, 1785 established a farinha institute and ordered that all farinha arriving by sea be placed in government storage for redistribution because of the shortage of that basic food item; and in 1834 the crisis caused by the lack of farinha in the municipio of Cachoeira, capital of the tobacco zone, resulted in the decree that all slave owners were to plant 500 covas of mandioca for each slave (14, Vol. II: 29-38; 22: 300-301). The fact that these laws continued to be issued indicates that the attempt to increase food supply by legislation met with a singular lack of success.

Present Sources of Food Supply

The problem of urban food supply continues today. The problem is not unique to Salvador. Webb observes that rapid urbanization in Brazil has created problems of urban food supply. "The fact that increasing numbers of city dwellers require more and more food poses difficult questions" (254: 3). The succeeding discussion is devoted to the present geography of food supply of Salvador with major emphasis placed on horticultural products. In analyzing the location of agricultural areas that produce food for Salvador, it must be remembered that the city's food supply problems were not created by rapid urbanization; rather, the increased urban population has modified and, in some instances, increased food supply problems that have existed for more than four centuries.

The points of origin of most of the major agricultural crops that constitute Salvador's food supply are shown in Table 3. The data were obtained from a review of statistics compiled by the Market Information Service (SIM) of the Secretary of Agriculture of the state of Bahia. In August 1971 SIM began to keep records of food products entering Salvador. The task was relatively easy, because there are few roads into the city and no vehicles pass through Salvador en route to other urban centers. Records were kept of the quantity of food produce passing through fiscal inspection stations on roads leading to the city. In addition, agents checked produce unloaded at

TABLE 3

ORIGIN OF SALVADOR'S FOOD SUPPLY BY MICRO-REGIONS OF BAHIA
AND BY OTHER BRAZILIAN STATES*

(In Percent)

August, 1971-July, 1972

Product	MICRO-REGION**							
	133	135	136	139	140	143	144	145
abóbora	-	-	1	-	1	32	16	1
tomatoes	-	-	3	3	4	2	67	3
chu-chu	-	-	1	-	-	3	71	-
greenpeppers	-	-	4	-	25	1	63	2
okra	-	-	-	-	1	-	-	-
cabbage	-	-	-	-	-	-	55	-
onions	2	-	-	-	31	-	-	-
stringbeans	-	-	-	3	-	4	39	1
cucumbers	-	-	5	3	-	18	32	1
lettuce	-	-	-	-	-	-	-	-
carrots	-	-	-	-	-	1	8	1
fresh corn	-	1	-	-	-	26	16	-
taro	-	-	-	-	-	2	2	-
aipim	-	-	-	-	-	13	-	-
sweet potatoes	-	-	-	-	-	33	7	-
irish potatoes	-	-	-	-	-	-	12	-
farinha	-	-	-	-	-	-	18	-
rice	-	-	-	-	-	-	-	-
beans	-	19	-	3	1	11	1	1
dried corn	1	7	1	4	-	8	-	-

TABLE 3, continued:

Product	MICRO-REGION							Total Bahia
	147	148	149	150	151	152	154	
abóbora	2	6	-	-	21	-	-	80
tomatoes	-	-	-	1	1	-	-	84
chu-chu	-	-	-	4	7	-	-	86
greenpeppers	-	-	-	2	1	-	1	99
okra	-	1	-	31	66	-	-	99
cabbage	-	-	-	2	4	-	-	62
onions	-	1	-	-	-	-	-	33
stringbeans	-	-	-	35	1	-	-	83
cucumbers	-	-	-	19	2	-	-	80
lettuce	-	-	-	99	-	-	-	99
carrots	-	-	-	1	-	-	-	11
fresh corn	-	10	-	-	47	-	-	100
taro	-	-	-	-	96	-	-	100
aipim	-	-	-	55	32	-	-	100
sweet potatoes	-	1	-	1	43	-	-	85
irish potatoes	-	2	-	-	-	-	-	14
farinha	-	-	-	1	56	14	7	96
rice	-	-	-	-	-	-	-	0
beans	-	14	-	-	1	-	1	53
dried corn	-	10	1	-	1	-	-	53

TABLE 3, continued:

Product	S T A T E ***							PIA****
	ES	SP	MG	PA	RGS	ER	GBA	
abóbora	-	-	1	-	1	-	-	3
tomatoes	-	12	2	-	-	-	-	-
chu-chu	-	9	-	-	-	3	-	-
greenpeppers	-	-	1	-	-	-	-	-
okra	-	-	-	-	-	-	-	-
cabbage	-	37	-	-	-	-	-	-
onions	-	7	-	-	37	1	-	-
stringbeans	-	14	-	-	-	-	-	-
cucumbers	-	22	-	-	-	-	-	-
lettuce	-	-	-	-	-	-	-	-
carrots	-	67	2	-	-	-	-	-
fresh corn	-	1	-	-	-	-	-	-
taro	-	-	-	-	-	-	-	-
aipim	-	-	-	-	-	-	-	-
sweet potatoes	-	1	-	-	-	-	-	-
irish potatoes	-	63	21	-	1	-	-	-
farinha	5	-	-	-	-	-	-	-
rice	-	9	11	1	58	9	12	-
beans	1	6	27	-	-	-	-	-
dried corn	2	7	11	-	-	-	-	-

TABLE 3, continued:

Product	S T A T E						Total Other States*****
	PER	SER	ALA	CEA	MAR	FAR	
abóbora	4	4	-	-	4	-	17
tomatoes	1	-	-	-	-	-	15
chu-chu	-	1	-	-	-	-	13
greenpeppers	-	-	-	-	-	-	1
okra	-	1	-	-	-	-	1
cabbage	-	-	-	-	-	-	37
onions	20	1	-	-	-	-	66
stringbeans	-	1	-	-	-	-	15
cucumbers	-	-	-	-	-	-	22
lettuce	-	-	-	-	-	-	0
carrots	-	19	-	-	-	-	88
fresh corn	-	-	-	1	-	-	2
taro	-	-	-	-	-	-	0
aipim	-	-	-	-	-	-	0
sweet potatoes	-	14	-	-	-	-	15
irish potatoes	-	1	-	-	-	-	86
farinha	-	-	-	-	-	-	5
rice	-	-	-	-	-	-	100
beans	1	8	4	1	-	-	48
dried corn	4	4	-	34	-	5	67

*Source: Compiled from data collected by SIM on file in the SIM office in Salvador.

**Any micro-region that did not produce at least 1 percent of one of the products listed was excluded from the table. Therefore, eleven of the twenty-six micro-regions are not included: seven in the semi-arid interior (131, 132, 134, 137, 138, 141, and 142), two in the transition zone (146 and 153), and two in the coastal zone (155 and 156).

***Any state that did not produce at least 1 percent of one of the products listed was excluded from the table.

TABLE 3, continued:

****ES, Espirito Santo; SP, São Paulo; MG, Minas Gerais;
PA, Paraná; RGS, Rio Grande do Sul; ER, Estado do Rio de Janeiro;
GBA, Guanabara; PIA, Piauí; PER, Pernambuco; SER, Sergipe; ALA,
Alagoas; CEA, Ceará; MAR, Maranhão; PAR, Paraíba.

*****Totals in the "Total Bahia" column and the "Total Other States" column do not add up to 100 percent in the case of every product, because percentages used in all columns have been rounded off to the nearest 1 percent.

Salvador's two principal wholesale markets, Sete Portas and São Joaquim, to insure that no trucks entered the city undetected and to include produce brought by saveiro to São Joaquim.

Officials of SIM believe that their data represent the pattern of food supply for Salvador but are the first to admit that their information is not 100 percent accurate. For this reason, these statistics should be regarded as an approximation of the geography of Salvador's food supply for the twelve-month period, August, 1971 through July, 1972.

Physical limitations of food production are reflected in the compiled information. Bahia, as the rest of the Northeast, has three primary regions--the humid coastal zone, the semi-arid interior, and the transition zone between these two areas. Only limited areas in the semi-arid interior are suitable for food crops because of inadequate rainfall. One of these productive areas is the municipio of Irece in micro-region 135, Chapada Diamantina Setentrional, which is an island of bean cultivation in the caatinga whose production is consumed in Pernambuco and Paraíba as well as Bahia (77). Salvador receives almost 20 percent of its beans from this area. (Several varieties of beans are consumed in Salvador. The kind discussed here is the most popular, feijão mulatinho, a variety of kidney bean, Phaseolus sp.) Bean planting in Irece soared from 4,800 hectares in 1956 to 10,500 hectares in 1968, in large measure because of improved transportation facilities (132, Vol. I: 1-25). Salvador is expected to receive a greater portion of its bean supply from

Irece upon completion of the paving of the Estrada de Feijão (Bean Highway) which links the state capital with Irece and is one of the priority projects of the state highway department.

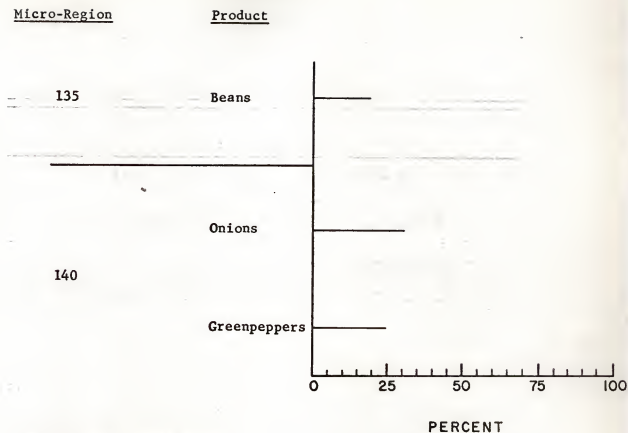
The second food produce area in the semi-arid interior is in the São Francisco valley. This region, traditionally an area of extensive cattle grazing, has become an important agricultural producing area because of irrigation projects sponsored by the Superintendency of the Valley of the São Francisco (SUVALE). As a result of this irrigation network, Bahia, since 1965, has become the greatest onion producer in the Northeast with production and commercialization centered on micro-region 140, Corredeiras do São Francisco (51: 2). In addition to receiving 31 percent of its onions from this area, Salvador also receives 25 percent of its pimentão, greenpeppers, Capsicum frutescens, from micro-region 140.

In Bahia, the two main areas of food supply for Salvador are the coastal region and the transition zone. Seven micro-regions make up the coastal strip: Litoral Norte Baiano (149), Salvador (150), Recôncavo Baiano (151), Tabuleiros de Valença (152), Cacaueira (154), Interiorana do Extremo Sul da Bahia (155), and Litoranea do Extremo Sul da Bahia (156). Of this entire coastal strip, only two micro-regions, Salvador and the Recôncavo Baiano, make a significant contribution to Salvador's food supply. These traditional urban supply centers continue to provide food produce for the city. The other regions along the coast have not entered the market for a variety of reasons, including poor

TABLE 4
PRODUCE FOR SALVADOR FROM ALL SOURCES*
August, 1971-July, 1972

Item	Unit of Measurement	Total Received in Salvador
abobora	kilogram	1,105,732
tomatoes	kilogram	8,959,666
chu-chu	one	2,648,620
green peppers	one	6,778,550
okra	1,000	20,308
cabbage	kilogram	1,053,763
onions	kilogram	2,402,204
stringbeans	kilogram	95,212
cucumbers	kilogram	67,605
lettuce	one	1,614,858
carrots	kilogram	623,720
fresh corn	one	1,975,270
taro	kilogram	259,835
aipim	kilogram	40,035
sweet potatoes	kilogram	1,075,745
irish potatoes	kilogram	1,105,732
farinha	50 kilogram sack	252,232
rice	60 kilogram sack	58,506
beans	60 kilogram sack	134,181
dried corn	60 kilogram sack	80,246

*Source: Compiled from data collected by SIM.



* Minor supply areas (micro-regions supplying Salvador with less than 15 percent of a product) have not been included.

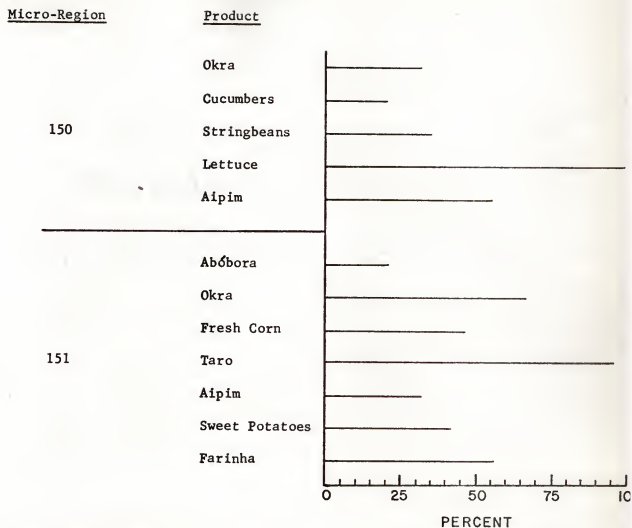
Source: Adapted from data collected by SIM.

Figure 7. Major Supply Areas for Salvador in the Semi-Arid Interior. (By micro-region/in percent.)*

transportation facilities and concentration of agricultural effort on commercial crops such as cacao in some regions.

The principal food items supplied from the coastal zone are abóbora, a kind of squash of the Cucurbita family (21 percent); quiabo, or okra, Hibiscus esculentus (97 percent); vagem, or stringbeans (36 percent); alface, or lettuce, Lactuca sativa (99 percent); aipim, or sweet cassava, Manihot aipi (87 percent); inhame da costa, or taro, Colocasia antiquorum (96 percent); batata doce or sweet potato, Ipomoea batatas (44 percent); and farinha de mandioca, or manioc flour, Manihot utilissima (78 percent).

Of all the food products received in Salvador, farinha de mandioca has the largest number of areas of origin within the coastal area. In addition to the Recôncavo, farinha is received from the micro-regions of Tabuleiros de Valença (14 percent) and Cacaueria (7 percent). Jequié, in the transition zone, provides 18 percent of the city's farinha. Farinha de mandioca is an important element in the diet of Brazil, especially in the Northeast, and has been since colonial times. Mandioca was cultivated in Brazil by the Indians before the arrival of the Portuguese, and farinha became a staple of the settlers and African slaves. It well deserves its unofficial title, "the bread of Brazil." Techniques of cultivation have changed little since the Portuguese arrived. Manioc is grown principally on small properties for home consumption, with the surplus used as a cash crop. Produced throughout Brazil, there are a large number of varieties with



* Minor supply areas (micro-regions supplying Salvador with less than 15 percent of a product) have not been included.

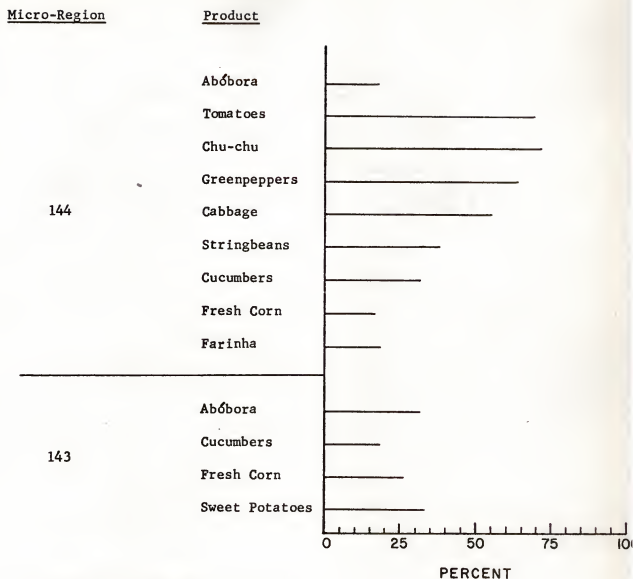
Source: Adapted from data collected by SIM.

Figure 8. Major Supply Areas for Salvador in the Coastal Zone.
(By micro-region/in percent.)*

such colorful local names as "cat killer," "miracle of Saint Anthony," "gold tooth," and "leather hat" (154: 53-56; 182: 2, 6). The farinha is produced in countless "casas de farinha" where the processes of peeling and washing the manioc, rasping, screening, settling, and drying are carried out by the farmer and members of his family. The process is relatively simple, requiring only manual labor, water, and fire, but the manufacture of a good batch of farinha requires considerable care during each stage of preparation.

The transition zone between the coast and the interior is also an important producer of food supplies for Salvador with two micro-regions, Jequié and Feira de Santana, containing the most important producing areas. From this transition zone Salvador receives such produce as abóbora (55 percent); tomate, or tomatoes, Lycopersicum esculantum (62 percent); chu-chu, or chayote, Sechium edule (74 percent); green peppers (66 percent); repolho, or cabbage, Brassica oleracea (56 percent); stringbeans (43 percent); pepino, or cucumber, Cucumis sativus (51 percent); milho verde, or fresh corn, Zea mays (52 percent); sweet potatoes (41 percent); farinha de mandioca (18 percent); and beans (27 percent). Two municípios in the micro-region of Jequié, Jaguaquara, and Itiruçu, stand out as exceptionally important producing areas. The agricultural revolution that has transformed these areas from the traditional pursuits of cattle ranching and the growing of coffee and cacao will be analyzed later in this chapter.

Salvador also receives a high proportion of her food



* Minor supply areas (micro-regions supplying Salvador with less than 15 percent of a product) have not been included.

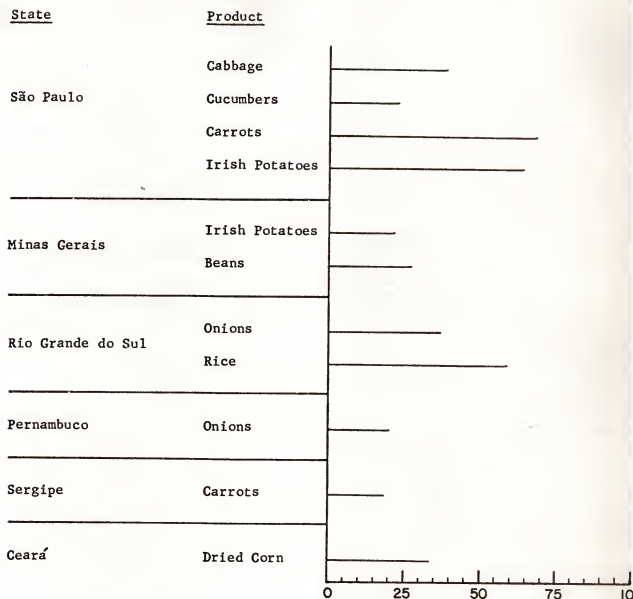
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Source: Adapted from data collected by SIM.

Figure 9. Major Supply Areas for Salvador in the Transition Zone.
(By micro-region/in percent.)*

from imports from other states, ranging from Maranhão to Rio Grande do Sul. Among these imports are abóbora (17 percent); tomatoes (15 percent); chu-chu (13 percent); cabbage (37 percent); onions (66 percent); stringbeans (15 percent); cucumbers (22 percent); cenoura, or carrots, Daucus carrota var. sativa (88 percent); sweet potatoes (15 percent); batata inglesa, or irish potato, Solanum tuberosum (86 percent); arroz, or rice, Oryza sativa (100 percent); beans (48 percent); and milho em grau, or dried corn (67 percent).

The primary concern of this dissertation is the source of supply of horticultural products, but points of origin of other food products should be mentioned. The source of supply of beef today is about the same as it was 400 years ago--the semi-arid interior. The main change in the beef situation has been caused by the transportation revolution. Cattle are now trucked to a variety of centers for sale and fattening instead of moving in large cattle drives to Feira de Santana. Although still retaining an important cattle fair, Feira de Santana now has competition from fairs in other cities, including Jequié, Mundo Novo, Itaberaba, and Vitoria da Conquista. Salvador relies on imports from other states to a large extent to meet the demand for chickens and eggs. A 1967 study revealed that 49.7 percent of the chickens and 66.3 percent of the eggs sold in Salvador had been imported from other states (chickens--90 percent of the imports from São Paulo and the state of Rio de Janeiro, 10 percent from Pernambuco; eggs--53 percent of the imports from São Paulo,



* Minor supply areas (states supplying Salvador with less than 15 percent of a product) have not been included.

Source: Adapted from data collected by SIM.

Figure 10. Major Supply Areas for Salvador Outside of Bahia.
(By state/in percent.)*

47 percent from Espirito Santo (162: 20-21). No recent study concerning milk consumption in Salvador is available, but retailers agree that the results of a 1959 survey still hold true in general terms. This study showed that Salvador's milk shed consisted of seventeen municípios around the perimeter of Salvador, extending to the transition zone around Feira de Santana. It also noted that about 63 percent of the milk consumption was in the form of powdered or condensed milk that had been imported from states to the south (7: 9-14).

The city of Salvador traditionally had two sources of food supply--within the limits of the city itself and from the Recôncavo, especially its southwest portion. Today Salvador receives food from Bahia and other states. Within the state, most food is produced in the coastal and transition zones, although two micro-regions, Chapada Diamantina Setentrional and Corredeiras do São Francisco, are food-producing regions in the semi-arid interior. In the coastal zone the micro-regions of Salvador and Recôncavo Baiano, traditional sources of the city's food supply, are the main producers, while in the transition zone the micro-regions of Feira de Santana and Jequié are major food suppliers. Salvador's food imports come from a variety of states, with the highest percentage received from southern states.

The major factors in this change of food supply location are the revolution in transportation and the changes in marketing practices. Commenting on this situation, the state government said that it is almost inconceivable that perishable produce

travels almost 2,000 kilometers, at very high costs (especially when compared with the relatively low-selling price), and is placed in the market of Salvador "because of the absolute productive incompetence of the city's satellite region"(189: 30). Perhaps the situation is inconceivable, but it is nonetheless quite true. The food-producing areas within the city limits have almost entirely been eliminated by urban expansion: agriculture within the other traditional supply area, the Recôncavo, has not progressed.

The sources of supply of some highly perishable products, such as lettuce, and some bulky, low-value tubers, such as aipim, are found close to Salvador in accordance with the von Thünen model. However, because the production and commercialization of agricultural products in Bahia have been altered only slightly in the past 100 years, agricultural producers in more advanced areas, especially in São Paulo, have been able to take advantage of Brazil's expanding highway network and place their produce in Salvador's markets at prices competitive with local sources. The following section of this chapter discusses the agricultural revolution that has taken place in the Bahian município of Jaguarquara and transformed this area into a major producer of horticultural products for Salvador.

The Agricultural Revolution in Jaguarquara

The data in Table 3 and Figure 9 demonstrate the impor-

tance of micro-region 144, Jequié, in the production of food for Salvador. The growing regional capital, Jequié, with an urban population of 65,649 in 1970, is located mid-way between the semi-arid interior and the humid coastal zone. The region contains contrasting areas and differing agricultural activities, from cattle raising in the caatinga to cacao in the humid area (212: 73). Within this micro-region, two adjacent municípios, Jaguaquara and Itiruçu, stand out because of their great contribution to Salvador's food supply. During the period August, 1971 to July, 1972, these two municípios alone provided Salvador with 67 percent of her tomatoes; chu-chu, 65 percent; green-peppers, 63 percent; cabbage, 55 percent; greenbeans, 38 percent; cucumbers, 32 percent; abóbora, 14 percent; and irish potatoes, 11 percent (Table 5). Both of these municípios have experienced an agricultural revolution within the last twenty years, changing from producers of traditional export crops and cattle to food producers for Salvador. This revolution has been brought about to a large extent by the establishment of Italian agricultural colonies in these two municípios in the early 1950's. The concluding portion of this chapter is devoted to a description of the great changes in the município of Jaguaquara, introduced by one of these colonies.

The settlement that eventually became the município of Jaguaquara originated on a large cattle ranch known as "Cova de Onça" (Pit of the Jaguar). When the settlement achieved its first official administrative status as a district, the name

TABLE 5

PRODUCE FOR SALVADOR FROM JAGUAQUARA AND ITIRUÇU*
August, 1971-July, 1972

Item (unit)	Received from Jaguaquara and Itiruçu	Total Received in Salvador	Per Cent
tomatoes (kg)	6,013,307	8,959,666	67.11
chu-chu (one)	1,726,615	2,648,620	65.18
greenpeppers (one)	4,276,585	6,778,550	63.09
cabbage (kg)	580,843	1,053,763	55.12
stringbeans (kg)	36,872	95,212	38.72
cucumbers (kg)	21,655	67,605	32.03
abóbora (kg)	163,480	1,105,732	14.78
irish potatoes (kg)	351,535	3,019,823	11.64
carrots (kg)	47,570	623,720	7.62
okra (1,000)	727	20,308	3.57
sweet potatoes (kg)	35,508	1,075,745	3.30
taro (kg)	3,000	259,835	1.15
aipim (kg)	150	40,035	0.37
farinha (50 kg sack)	150	252,232	0.15

*Source: Compiled from data collected by SIM.

selected was Jaguaquara, the Tupi translation of the Portuguese name of the original ranch (jaguar--onça, quara--cova). Jaguaquara became a município in 1921 and has had the same area, 930 square kilometers, since 1944 when the district of Itiruçu was made a separate município (82, Vol. XX: 358).

Jaguaquara was traditionally a cattle area and producer of export crops such as cacau, coffee, and tobacco. In the early 1900's, one of the first secondary schools in the interior of Bahia was established in this município through the combined efforts of Zaccariah Taylor, a Baptist missionary from the United States, and Coronel Egídio Almeida, a local rancher who did not want his children to travel to Salvador for their education. The Colegio Taylor-Egídio, still flourishing today, is important, because the school's director for the past thirty-six years, Dr. Carlos Dubois, has been active and forceful in advocating agricultural change in the município.

The Italian colonies for Jaguaquara and Itiruçu were started in 1950, thanks in large measure to the efforts of Dubois who convinced a federal deputy to bring enough pressure to bear on the national government to obtain approval for the project from the National Institute of Agrarian Development (INDA). (The responsibilities of INDA are today carried out by INCRA). The colonists came from the Siena Valley, near Florence in the province of Tuscany. Thirty families settled in Jaguaquara, twelve in Itiruçu. Each colonist received between forty and sixty hectares of land, a house, a mule, and financial and

technical assistance. The original colony had an area of 1,770 hectares and was located about seven kilometers from the town of Jaguaquara (113: 35). The colony has now been liquidated; all of the original colonists own full titles to their land, and many have increased substantially the size of their holdings. But the road to success has not been an easy one.

The first problem was caused by the initial site of the colony, an old cattle ranch that had been over-grazed. Surface water is scarce in this area, and low rainfall during the 1951-1954 period gave the project an inauspicious beginning. A second problem was created by the Brazilian government's program to encourage the Italians to engage in wheat farming. Some planner in the distant Ministry of Agriculture, concerned about Brazilian dependence on wheat imports from the United States, decided that the Italian colonists could be major producers for Brazil. The colonists complied, but the government's failure to provide combines for harvesting brought the experiment to an end. The only wheat grown today in Jaguaquara is found in the kitchen gardens of the Italians for personal use. Dubois is given credit by local residents for helping the colonists surmount the initial difficulties. Born in Brazil of French parents, he knew from personal experience the problems faced by foreigners in establishing themselves in a new country.

When they first arrived, the colonists rented their farms until they could earn enough to pay for their land. This has now been accomplished by all. They still own the lands originally

settled, but because of intensive farming, much of this land is now in pasture. The sequence for many has been to purchase additional land, build a second house, and place the new holding under intensive cultivation. Almost all of these second holdings are along streams which are plentiful in the municipio. The third step is to buy a house in town. The most successful now have three houses: the original, rented to Brazilians, with much of the land in fallow or in pasture; a second on purchased land under cultivation; and a third in the town of Jaguaquara. The colonists were an industrious group, and today even the most prosperous are still personally working their land.

After a slow start, farming was directed to the growing of fresh produce for urban markets, and production has soared. The most noteworthy crop for which statistics are available is tomatoes, with ten hectares producing 93,500 kilograms in 1955, evolving to 1,900 hectares producing 8,150,000 kilograms in 1970.* When the Italians began growing fresh produce, they hired local Brazilian males to help them perform the manual labor required. This permitted a transfer of knowledge of production techniques and of the use of fertilizer which the Brazilians have subsequently employed on their own farms. Another factor which has aided the growth of agriculture in Jaguaquara has been the improved transportation network. Fif-

* Statistics provided in an interview with DEE officials in September, 1972.

teen years ago, truck driving time to Salvador was eighteen to twenty hours; today, on the paved Rio-Bahia, it is four to five hours; and with the new ferry service across the bay, travelling time from Jaguaquara to Salvador is from two and one-half to three hours.

Agricultural development in Jaguaquara has had a salutary effect on the entire area. The impression one gets is that of progress and growth, in contrast to the stagnation of Nazare. Population has grown from 19,925 in 1940 to 25,953 in 1970, with the most marked growth registered in urban areas, from 3,219 to 8,276, indicating a more vital urban economy and the increase of rural access roads that permit farmers to live in town.

The leaders of Jaguaquara are striving for further improvements. Local farmers state that the Italians eventually succeeded because of sustained financial and technical assistance from the government. They maintain that if the government would do the same for poor Brazilian farmers, through a cooperative or some other channel, the municipio could triple its present production rate. Steps are now being taken for the formation of a cooperative in the municipio which, among other goals, would seek to aid farmers in the commercialization of their produce. The present system for marketing produce in Jaguaquara to be sold in urban centers is discussed in the next chapter.

The striking agricultural development in Jaguaquara within the last twenty years demonstrates that it is possible to induce change. In this municipio, an Italian agricultural

colony was the primary agent of change. René Dubois, son of Carlos Dubois, former administrator of the colony and former mayor of the município, summed it up when he wrote: "In Jaguaquara the arrival of foreign colonists, bringing a new kind of agriculture and receiving a modern technical orientation, caused a true revolution in agriculture, not only in the município but in neighboring ones as well. Since its creation, the Nucleo Colonial de Jaguaquara has acted, and continues acting today, as an extraordinary agent of development in the community" (78: 7).

The example of the agricultural revolution in Jaguaquara demonstrates the progress that is possible when adequate support is provided for the human resource base. The development of the Italian colony was difficult, but a similar project with rural Brazilian farmers would probably prove to be even more arduous. Concerning Italian immigrants to São Paulo, Lambert observed that in their case modern Brazil had to assimilate individuals of a foreign, but contemporary, culture. In the case of rural Brazilians, migrating to the city, assimilation was more difficult, because it involved persons of the same culture but that culture as it existed several centuries ago (140: 107).

In spite of the obstacles encountered, Brazilian farmers can make the transition from archaic to modern Brazil, as witnessed by the successful adaptation of the Italian's agricultural methods by local farmers in Jaguaquara. Observers in that município maintain that this transition was facilitated by the

fact that Brazilian farmers learned the techniques by participating in their application in the field, working side-by-side with the Italians, and not by merely being told or shown the new methods. The difficulties met in changing agricultural styles should not cause despair or the writing-off of the subsistence farmer as a hopeless case but should stimulate greater efforts in the fields of rural education, agricultural research, extension services, and services to cooperatives.

CHAPTER IV

TRANSPORTATION REVOLUTION: FROM SAVEIRO TO DIESEL TRUCK

Modern transportation methods have obliterated almost all traces of von Thünen land-use patterns around urban areas in industrialized societies. As a result of technological advances in such fields as the mechanization of agriculture, transportation, refrigeration, and produce containers, highly specialized agricultural regions have emerged, many in areas far distant from the cities where the produce is consumed. Shipment of horticultural products even crosses international boundaries, as witnessed by the cultivation of vegetables in western Mexico for the United States market and the shipment of fresh produce from Canada to islands in the Caribbean. In many parts of the world, this technological progress has eliminated the isolation von Thünen hypothesized for his ideal state.

Only recently has the impact of the transportation revolution been felt in Brazil. For hundreds of years urban areas developed in almost complete isolation from each other. Brazil's rivers do not provide a natural transportation system. Because the original settlement of Brazil consisted of widely scattered colonies along the coast, a fragmented and unconnected transportation network came into being that lasted for centuries.

This same pattern was followed when railroads were constructed and only in recent decades, with the building of highways, has a concerted effort been made to unite the national territory with an integrated transportation system. As recently as 1964, Brazil was classified as an "immobile nation" because of the deficiencies of her transportation network (177: 58). These deficiencies have not been overcome completely, but giant strides are being taken to make the nation more mobile.

Transportation and National Integration

Basic Brazilian national aspirations have been defined as independence, sovereignty, maintenance of territorial integrity, and maintenance and defense of national unity (198: 70). The motivation for Brazil's present drive to modernize her transportation system draws strength from each of these aspirations.

From the time of the first colonial settlements until the early part of this century, Brazil was in the process of expanding her national territory. The expansion period began with the bandeirantes of São Paulo, Bahia, and other areas, who ranged throughout much of the vast interior of the continent in search of gold and slaves (153: 71-171). The era was terminated by the brilliant diplomatist, the Baron de Rio Branco, who obtained the final international agreements to Brazil's present boundaries in the twenty years following the establishment of

the Republic in 1889. The extent of Brazil's territorial expansion is demonstrated by the fact that every other nation in South America, with the exception of Chile, once considered part of the present day Brazil as included within its national boundaries.

The total national territory increased greatly, but the effective national territory remained confined to a narrow strip along the Atlantic coast.* Even within this comparatively small area, strong centrifugal forces constantly threatened to dismember the nation. Vast regional differences and the physical obstacles to transportation routes made difficult the development of national cohesion.

Brazil's rivers do not provide her with a natural transportation system. The Amazon flows through the nation's least inhabited territory. The São Francisco, for hundreds of years the primary interior transportation route between north and south Brazil, is ill-equipped for this function. Known as "the

*The term "effective national territory" is used in this dissertation in its political sense to describe that portion of the total national territory effectively controlled by the central government. This concept was developed by Whittlesey who wrote that "By 'central authority' is meant sovereignty over an area of marked diversity. To be 'effective' the central government must exert more than nominal control over an area. Today 'effective central authority' is a function of the national state" (259: 219). The term "effective national territory" has been used in an economic sense by James and Webb to describe that proportion of a country's total area which is productive in more than a subsistence sense and which contributes to the economic life of the entire nation (252: 155).

river of national unity," the São Francisco flows north from its source in the uplands of Minas Gerais. Passing through the backlands of Bahia, the river parallels the Atlantic coast for a thousand miles with a drop of only 175 meters (47: 12-14; 148: 123-24). On its swing eastward to the ocean, the river drops 235 meters over the Paulo Afonso falls, the unfortunate barrier that has always prevented navigation from the coast to the Brazilian interior and has now made possible a huge hydroelectric plant to provide power for the Northeast.

The original settlement pattern of Brazil gave rise to the establishment of a fragmented transportation system, because land use was determined by external commercial interests, and communication lines were constructed to focus economic activity on the port cities rather than to provide an intermeshing network designed to integrate the national territory. Prado writes:

These lines of penetration linking the coast to the interior, all of them detached from each other, led to a fragmentary arrangement of communications in which each axis developed an isolated and self-sufficient system establishing no intercourse with the other lines of travel. Each system consisted of the two extreme points--coastal centers and interior--linked only along the route established between them and leading a more or less separate existence. (184: 277)

When railroads were constructed in Brazil, the lines closely followed the transportation pattern established during the colonial period. Lines were built to link port cities with the interior but not to interconnect different regions of the

nation. In the last twenty years a concerted effort has been made to unite the country with roads and highways.

Brazil's underdeveloped transportation system made it impossible for the effective national territory to coincide with total national territory. Brazilian history reveals a long struggle by the national government to achieve control over its own territory. Examples of this struggle abound: the period of Dutch control in the Northeast; the series of state revolts in Rio Grande do Sul, São Paulo, Minas Gerais, and Bahia; and the attempt to establish the Republic of the Equator in Pernambuco. The problem of establishing effective control has been especially serious in the Northeast and is illustrated by the following episodes involving the government's efforts during the past seventy-five years to extend government control to the sparsely populated backlands: the difficulty in subduing Antonio Conselheiro and his followers encamped at Canudos in Bahia (70); the inability to control Padre Cicero and his private army in the interior of Ceará (72); the long period in which the public authorities were frustrated in their efforts to capture the notorious backlands bandit, Lampião, and his band (151; 175); and, most amazing of all, the Long March of the Prestes Column which covered more than 14,000 miles through the interior of Brazil from Rio Grande do Sul to Ceará, from April, 1925 to February, 1927, when 650 of the original 2,000 men crossed into Bolivia (13; 145).

The above incidents represent the headlines describing

the government's lack of control over its own national territory. No less important was the day-to-day authority of the large landowners. Crist noted that the early settlement of the interior along the São Francisco valley witnessed the establishment of huge cattle ranches to supply meat for the coastal sugar plantations. The ranchers found a sparse, racially mixed, lawless society residing in the sertão that was soon incorporated into one of the private armies maintained by each cattle ranch. Since the establishment of these large ranches in colonial times, whose owners became essentially a feudal society of backland nobility, political power and control of the region was often in the hands of the landowners and not the government (68). João Guimarães Rosa describes this political situation.

Everything is politics and political leaders. This part of the country has now become sluggish with peace, and I am a private citizen. But farther up there, there are still big ranchers whose word is law--all of them rulers of bold mobs, gangs of henchmen with sawed-off shotguns and carbines. On every ranch there is always a sentinel patrolling the boundary, with a rifle under his arm, as wary as a jaguar feeding on a carcass. Yes, indeed. The same thing is true along the banks of the river, and if you go down the São Francisco, every place is held by a big landowner, with his whole family, his thousand jagunços. (200: 193)

The above discussion is intended to emphasize the fact that the drive behind Brazil's road building projects is not derived solely from the desire to provide an infrastructure for economic development but in part stems from the aspiration of

the government to integrate the national territory and extend government control throughout the nation. This fact is illustrated by the title of the government's project to construct the 2,475-kilometer Transamazonica Highway and the 1,500-kilometer Cuiaba-Santarem Highway--"The Program of National Integration" (164: 29).

Railroads

Lacking a natural transportation system, Brazil's first effort to construct a transportation network with railroads provides a history of blunders, mistakes, poor planning, inefficient operation, and ineffective corrective measures. Two basic obstacles prevented the development of an integrated railroad system: topography and widely dispersed population centers. Brazil has one of the world's worst topographies for railroad construction, with an escarpment rising 800 meters, separating the narrow coastal plain from the interior for hundreds of kilometers, from a point just south of Salvador to southern Brazil. Even after the escarpment has been overcome, the uneven terrain requires many cuts, fills, bridges, and tunnels for a well-constructed roadbed (110: 357; 174: 134). Because Brazil had been colonized by the establishment of captaincies along the Atlantic coast, widely separated population clusters developed. This demographic pattern and the rugged terrain combined to create a situation which made the construction of Brazilian

railroads an unattractive venture.

The early railroads were built almost exclusively from a port city to an inland location for the purpose of extracting raw materials from the interior. The lines were not connected either along the coast or at the inland terminus. The pattern of railroad construction in the Recôncavo that has already been described was repeated throughout the nation. Denis, writing in 1911, described the railroad network in terms remarkably similar to those used by Prado to depict the colonial transportation system.

To be truthful, there is no general railway system in Brazil; there are small independent systems, covering with their meshes the regions of long-established colonization, but without intercommunicating lines. . . . Each of these local systems consists of a fan-shaped arrangement of lines, serving some particular region inland, and having its terminus at a seaport. The existence of the port is bound up with that of the railway. (73: 105)

A variety of foreign companies constructed the lines, and because there was no interconnection between lines, there was no need for standardization. The result was several track gauges, a variety of locomotives and cars, and different standards for roadbeds, bridges, gradients, and loading platforms. Brazil's railroads became even more inefficient as government ownership gradually replaced private management. By 1953 only 6 percent of the total railway mileage was owned and operated by private companies. The result was an excessive number of employees, construction of new lines in response to political pressure, and failure

to raise freight rates and passenger fares for fear of losing political support. In 1944 the Cooke Mission, a group of American technicians sponsored jointly by the government of the United States and Brazil, described the Brazilian railroad system as "a little of the best and much of the worst" and stated that "Brazil has not got around to building any sort of integrated system of transportation at all" (62: 130).

At the end of World War II, the railroad equipment was obsolete, the permanent way deteriorated, and the structure out of line with new patterns of internal trade. Rather than attempt to remedy the staggering problems of the railroads, the Brazilians shifted their emphasis to highway construction in their effort to develop a national transportation network. Railroad mileage has remained constant; road construction has soared (Tables 6 and 7). In 1948 the Latin American correspondent of the Economist pondered, "it is an open question whether the remarkable development of air transportation has bypassed or merely postponed Brazil's railroad age. If the country's resources are ever to become the lifeblood of its giant frame, then its actual predicament seems to be that it has acquired veins before arteries" (35: 339). The question has now been answered. The railroad age is over. The arteries for Brazil's giant frame will be provided by asphalt and concrete, not rails of steel.

TABLE 6
RAILROADS IN BRAZIL AND BAHIA: 1937-1971*
(Km.)

	1937	1945	1950	1960	1970
Bahia	2,164	2,307	2,603	2,593	1,946
Brazil	34,095	35,280	36,681	38,339	32,102

*Source: Anuário estatístico do Brasil. (Annual.)
(Rio de Janeiro: IBGE).

TABLE 7
HIGHWAYS IN BRAZIL AND BAHIA: 1937-1971**
(Km.)

	1937		1957	
	Paved	Total	Paved	Total
Bahia	15	11,824	129	31,600
Brazil	2,217	201,424	7,180	455,374

	1961		1971	
	Paved	Total	Paved	Total
Bahia	555	32,086	2,696	72,047
Brazil	14,133	499,550	50,263	1,039,779

**Source: Anuário estatístico do Brasil. (Annual.)
(Rio de Janeiro: IBGE).

Roads and Highways

At the end of World War II, Brazil found herself divided into two great islands--one in the north, the other in the south--with only coast-wise shipping connecting the two. The precarious transportation system was vividly brought home to Brazilians by German submarine warfare during the war. In May, June, and July of 1942, twenty-six died on eight Brazilian ships sunk off the north coast of South America. In August, 1942, over 600 lives were lost on five Brazilian ships that went down within twenty miles of the coast of Bahia and Sergipe, one ship carrying pilgrims to the São Paulo Eucharistic Congress (79: 233-34).

Since the 1950's, and especially beginning with the administration of President Juscelino Kubitschek, highways have been extended and paved at a rate unequaled in Brazilian history. This policy of highway construction has been continued by subsequent governments. Webb describes the present national road construction plan as "a comprehensive and sensible strategy which has as its goal the physical integration of practically all parts of the Brazilian national territory" (252: 147).

After neglecting the transportation sector for hundreds of years, a prodigious program of the national government has accomplished a great deal in a short time. In 1964 Brazil had 17,000 kilometers of paved highways; in 1972, 60,000; and, projected for 1974, 70,000. The total highway network increased five times between 1937 and 1971, and the extension of paved highways increased almost twenty-five times in the same period. The highway network in Bahia has increased at a rate commensurate with national growth (Table 7).

Major highways in Bahia are constructed and maintained by two organizations, one state and one national. The National Department of Highways (DNER) compiles the master plan for all highway construction in Brazil and coordinates the activities of the various state highway agencies, in Bahia the State Department of Highways (DER-Ba). Feeder roads in municipios, almost all of which are unpaved, are constructed and maintained by local governments. The federal and state highway network in Bahia is portrayed in Figure 11. The DER-Ba development plan for the 1972 through 1975 period calls for the construction outlined in Table 8.

The DNER has three priority projects in Bahia. The most important is the completion of a second Rio-Bahia highway which will closely parallel the Atlantic Coast and link Salvador and Rio de Janeiro. To be known as the Discovery Highway, because it will provide access to such historic sites as Porto Seguro, Monte Pascoal, and Caravelas, this second Rio-Bahia highway is scheduled to be completely paved and in operation in July, 1973. It is expected that the completion of this highway will enable the regions in the extreme south of Bahia to become more active contributors to Salvador's food supply. A state planning agency report in 1968 stated that transportation of agricultural products seemed to be one of the most serious problems in the isolated southern regions (132, Vol. I: 1-25). The other main projects of DNER in Bahia are the construction of a beltway around Feira de Santana and the addition of two more lanes to the Salvador-Feira de Santana highway. The most important project of DER-Ba is to complete the paving of the highway from Salvador to Irece, the most important bean-producing region of the state.

TABLE 8
DER-BA CONSTRUCTION PLAN: 1972-1975*
(Km.)

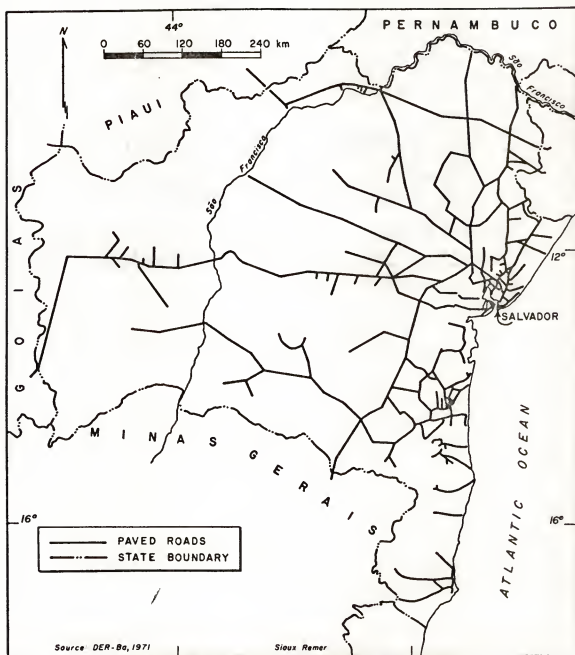
	1972	1973	1974	1975
Road Construction	908	1,646	1,424	973
Road Paving	<u>127</u>	<u>406</u>	<u>363</u>	<u>80</u>
TOTAL	1,035	2,052	1,787	1,053

*Source: "Programação plurianual de obras; desenvolvimento físico dos projetos de implantação básica." (Undated, six-page report on file in the DER-Ba office in Salvador.)

Diesel Trucks

Brazil's greatly expanded highway system has brought into being a new breed, the Brazilian truck drivers who are the modern banderiantes, providing the transportation services required by the expanding national economy.* A street saying in Brazil has it that there are three ways for a poor man to become rich: become a professional soccer player, win the lottery, or become a truck driver. Many trucks are independently owned and operated in small fleets of two, three, or four vehicles manned by relatives

*An indication of the impact of the truck on modern Brazil is demonstrated by the fact that a romance on the life of a truck driver won the Premio Nacional WALMAP of 1967, one of Brazil's highest literary awards. The judges, Jorge Amado, Joao Guimarães Rosa, and Antonio Olinto, awarded the coveted prize to Oswaldo França Junior for his novel, Jorge, um Brasileiro (97).



STATE & FEDERAL HIGHWAY NETWORK IN BAHIA

Figure 11

or close family friends.* Financing for trucks is relatively easy to obtain, and some companies, rather than shoulder the administrative costs of maintaining their own trucks, will agree to finance an independent operator on generous terms with the provision that he haul for the company when required. By entering the business in this manner, an individual may be able to work himself up to being the owner of a small fleet. The number of cargo vehicles in operation in Brazil increased from 73,350 in 1942 to 615,615 in 1969 (Table 9).

TABLE 9

VEHICLES IN OPERATION IN BRAZIL AND BAHIA: 1942-1969**

		Total	Passenger	Cargo
1942	Bahia	4,261	2,724	1,537
	Brazil	197,891	124,541	73,350
1950	Bahia	9,689	5,675	4,014
	Brazil	409,486	237,484	172,002
1965	Bahia	51,869	36,642	15,227
	Brazil	1,993,651	1,465,728	527,923
1969	Bahia	78,157	58,244	19,913
	Brazil	2,758,707	2,143,092	615,615

**Source: Anuário estatístico do Brasil. (Annual.)
(Rio de Janeiro: IBGE).

*The Brazilian truck driver is noted for his independent spirit. Under the present government, certain nationalistic

With the tremendous expansion of the Brazilian highway network, areas of the country that were almost completely isolated from one another have been brought into intimate contact through the medium of the diesel truck. Designed to promote development and national integration, the expanding highway system has also opened a variety of geographic options for the procurement of food supplies. The effect in Salvador has been to by-pass traditional sources of supply and, instead of reinvigorating and stimulating these areas, to rely on distant sources of food supply such as the state of São Paulo where more modern methods of agricultural production and commercialization have been implemented.

Transportation of fresh produce over large distances is certainly not unique to the Brazilian situation. The soaring importation of winter fruits and vegetables from western Mexico into the United States is a case in point. This trade increased from \$18.9 million in 1956 to \$99.6 million in 1967. Producers for the winter market in the United States traditionally have

bumper stickers have become popular, such as "Brazil: Love It or Leave It" and "Brazil: Today, Tomorrow, Forever." Truck drivers, however, prefer to paint their own slogans on their bumpers if they have a message for the world. The following are a few examples observed on the highways of Bahia: "Thank God I was Born Diesel;" "Don't Point Out my Defects with a Dirty Finger;" "Life is Hard Only for the Soft;" "In the School of Life There are no Vacations;" "A Rich Man Running is Exercising, A Poor Man Running is a Thief;" "Rich Man Kills a Poor Man-- Corpse Goes to Jail;" "As Long as I Drive Slowly my Mother Still has a Son;" "Faith in God, Foot on the Accelerator;" "Between Blondes and Brunettes I Prefer Both;" "Read the Bible."

been California, Texas, and Florida. Mexico has moved ahead of Texas and California and has the potential of becoming the dominant supplier. Tomatoes are the most important item of winter produce imported from Mexico, comprising 71 percent of the value of fresh vegetable imports (236). An important difference in this situation and that existing between São Paulo and Bahia is that Mexico may achieve a comparative advantage with Florida because of low labor rates--\$2.10 a day in Mexico, \$1.30 per hour and up in Florida. In Brazil the situation is reversed with higher wages prevailing in the exporting region rather than in the importing areas. The advantage for São Paulo lies not in lower wage rates but in production and organization methods that have been neglected in Bahia.

Feira de Santana plays an important role in Salvador's food supply system, because it is located at a vital highway junction. Feira's historic weekly market, one of the largest in Brazil, is important for local supply but does not play a large part in the supply for Salvador. However, as a road junction, with highways from São Paulo, Juazeiro, western Bahia, Aracaju, Recife, and Salvador all converging on Feira, the city acts as a communications center for information on prices of food products throughout the Northeast. Truck drivers, in many cases independent operators, arrive in Feira and there seek out price information through informal channels and word of mouth communication. Market information on wholesale prices at all capital cities in the Northeast is gathered by each state

department of agriculture and disseminated by SUDENE on a weekly basis through each state's market information service. Truck drivers maintain, however, that more accurate and timely price information is available at truck stops and from other truckers than that published by SIM.*

Saveiros

Until the transportation revolution, Salvador was isolated from the immediate hinterland by a ring of commercial crops and received food supplies from within the city limits or by sea. Both Carneiro and Azevedo, in their descriptions of early Salvador, have stressed the major role played by small boats in bringing food supplies to Salvador from areas in the Recôncavo (43: 98; 22: 345-47). Of major importance in water transport of food stuffs has been the colorful saveiro, a sail boat that has traditionally been an integral part of the Salvador scene but is now sailing the Bahia de Todos os Santos in diminishing numbers. In 1944 Crist remarked: "From islands and the peninsula across the bay, on picturesque sail boats, a variety of produce is brought in to the Bahia market: pottery, charcoal, fruits and vegetables of many kinds" (67: 542).

* Each week the Secretary of Agriculture issues a bulletin which gives the average wholesale prices for about twenty-five food products in the nine state capitals of the Northeast. In Salvador, this bulletin is published in only one of the four newspapers, Jornal da Bahia, and is ignored completely by radio and television stations.

Jorge Amado vividly describes the activity surrounding the unloading of saveiros at the Rampa do Mercado.

And from the saveiros come baskets of okra and mangoes, hogs, flitches of bacon, cans of dendé oil, charcoal, cashews, pottery, and a splendid world of things all carried to shore on the heads of porters, true balancing artists who pass from one saveiro to another with the agility of cats, with the same elegance whether they are carrying three sacks of farinha or a fighting cock. (30: 35-36)

The traditional saveiro is about eight meters long, carries approximately five tons of cargo, and sails with a crew of two. It is lateen rigged and the same kind of ship as the dhow which, since time immemorial, has sailed the waters of the Red Sea and the Indian Ocean. The Andersons note that the lateen rig is still found from Portugal to the Black Sea, in the Red Sea and Persian Gulf, on the west coast of India, and down the east coast of Africa as far as Zanzibar. "It may be only a very strange coincidence, but it is worth noting that this is more or less the area over which the Mohammedan religion extends or once extended" (16: 102). The saveiro is probably a kind of sail boat introduced in Portugal by the Moors and later transmitted to Brazil. The second kind of saveiro is larger, from twelve to eighteen meters in length, has a cargo capacity of up to fifteen tons, and usually carries a crew of four. The sail is raised on a boom that stands perpendicular to the mast; the rig is best described as a modified lateen, because it represents a local adaptation of the rig of the smaller saveiro.

There is unanimous agreement among mestres de saveiros, market stall operators, wholesalers, and port officials that saveiros played a unique and important role in supplying Salvador with food produce. There is also universal agreement that this role is declining each year. However, obtaining reliable statistical information on saveiro operation is a difficult task. Saveiro owners are required by law to register their craft annually with the Port Captain, but registration records do not indicate the use of the saveiro, whether cargo, fishing, or recreation, nor is there any information concerning the main port of call. The following discussion is based on several past studies that mentioned saveiros, conversations with mestres de saveiros and port officials, and observations at the main points of call in Salvador, the Rampa do Mercado and Feira São Joaquim, and at the main saveiro fairs in the Recôncavo at Nazare and Maragogipe.*

In 1959 it was estimated that 8,000 saveiros were engaged in the hauling of cargo in Bahia and that 10 percent, or 800 saveiros, made weekly trips to Salvador. At that time there were some fourteen landing points for saveiros, but most (about 80 percent) docked at one of the two major waterfront markets, the Agua de Meninos or the Mercado Modêlo, both destroyed by fire in the 1960's. Approximately 360 per week unloaded at the

* Publications which contain data on saveiros and their role in Salvador's food supply system include 52: 3/7-3/11, 3/27-3/29; 63: 212-20; 64: 13-17; 83: 561; and 119: 24-27.



Figure 12. Saveiros.

Mercado Modelo and 280 per week at Agua de Meninos. A 1967 survey showed about 600 saveiros in the Recôncavo devoted to cargo and 230 making weekly trips to Salvador. Principal landing points were the Mercado Modelo with 47 percent and Feira São Joaquim (constructed after the Agua de Meninos burned down) with 28 percent. In 1972 Salvador port authorities estimated that there were between 120 and 180 cargo saveiros operating in the bay, with most making weekly trips to Salvador. Observations at the principal landing points, São Joaquim and the Rampa do Mercado (the Mercado Modelo burned down in 1969, but the saveiro harbor is still used) indicated about seventy saveiros a week at the former and thirty at the latter. In less than fifteen years, the number of saveiros making weekly trips to Salvador has declined from about 800 in 1959 to 100 in 1972. The decline in traffic is also noticeable at the two largest saveiro fairs in the Recôncavo, Maragogipe and Nazare. Thirty-five saveiros generally go to Maragogipe each week and twenty to Nazare; in 1958 Santos noted 110 saveiros a week departing Nazare for Salvador (213: 8).

The saveiro is rapidly losing out to the truck as a means of transporting food to Salvador. It is estimated that in 1971, only 5 to 8 percent of Salvador's food arrived in this traditional manner. It is difficult for the saveiro to compete, for several reasons. The time consumed is an obvious factor. Others include the truck's ability to provide farm-to-store service, the truck's wide variety of options of markets, the decreased number of water-

front markets, and the deteriorating agricultural situation in many of the areas serviced by saveiro. The saveiro has to compete for cargo to haul to Salvador; it finds it even more difficult to get cargo to carry from Salvador to its home port, and often must return with an empty hold. In the past, saveiros carried on a two-way trade, carrying food products to Salvador and returning with cement, bottled drinks, plastic material, and other merchandise. This return trade is now almost completely monopolized by trucks, except that to the isolated areas around the bay which are difficult to reach by road.

It seems inevitable that the importance of the saveiro will continue to decline. This is unfortunate, because the saveiro trade has provided gainful employment for many and an important market linkage for small farmers in the Recôncavo. Costa Pinto wrote: "In the Recôncavo there are thousands of people for whom the sea is their 'ganha-pão,' who live on the sea and from it earn their living, making the saveiro their mount, the sea their workshop and bravery a routine" (64: 13).

With truck drivers rapidly replacing mestres de saveiro as the key agents in bringing food supplies to Salvador, the latter will soon be left with little more than the glory of the celebration of their Saint's Day, one area where it appears unlikely that the truckers will get the upper hand. The Dia de Motorista is July 25; the patron saint is St. Christopher. Only a handful of drivers appear for the special mass at the Basílica da Conceição da Praia, after which the vehicles parked

in front of the church are blessed. This ill-attended ceremony is in stark contrast with one of the most famous and brilliant religious commemorations realized in Salvador--the January 1 celebration of the day of Nosso Senhor dos Navegantes, who, in the syncretism of the Afro-Bahian religious cults, is also Imanjá, Goddess of the Sea. On the afternoon of December 31, the statue of Nosso Senhor dos Navegantes is brought by saveiro from the Church of Boa Viagem to the Basílica of Conceição da Praia, the imposing church of the lower city, constructed of stones brought from Portugal which, on arrival in Salvador, were found to be too heavy to raise to the upper city. After morning mass on January 1, the statue is returned by saveiro and escorted by a huge parade of boats to the Church of Boa Viagem. The saveiros have their one glorious day each year; they have a respected role in the history of Salvador. The decline of the saveiros' importance has been brought about in part by the changed marketing structure to be discussed in the next chapter.

CHAPTER V

THE MARKET SYSTEM: PAST AND PRESENT

The rise of the supermarket as the primary agency for the retailing of food in industrialized nations has combined with the transportation revolution to reinforce the tendency toward highly specialized agricultural regions. Supermarkets demand a constant supply of standardized produce. It is extremely difficult for the surplus of the small farmer to enter the vertically integrated marketing channels developed by these large chain stores.

In von Thünen's scheme, the farmer brought his produce to town where horticultural products were sold directly to consumers at the market place and grain was sold to merchants. He argued that farmers would take their grain to the largest town, because there the competition among buyers would assure the farmer the best price.

Von Thünen recognized that the marketing process was a factor in determining the location of the sale of produce. However, in the complex food distribution system in industrialized societies, the marketing process has an even more decided effect on the location of agricultural regions, because only food from those areas which grow large quantities of standardized produce

enters the system. The small farmer is hard pressed to sell his surplus unless he opens a road-side stand.

The sophistication of the marketing system of the United States has definite drawbacks. During the most prosperous years for farmers at the time of, and immediately following, World War II, the value of food commodities at the farm was about equal to the cost of their marketing, but in recent years the marketing bill has been twice the value of food commodities at the farm (57: 57-58). Supermarkets have come a long way from their humble, pine board, abandoned factory beginnings during the depression years. During the 1950's, supermarkets in the United States increased their share of the grocery business from 40 to 70 percent (156: 113). Recent decades have also seen a continued shift in population from rural to urban areas in the United States; there were only 44 percent as many persons living on farms and 56 percent as many farms in 1969 as in 1949 (87: 1).

In Salvador modern and traditional market systems exist side-by-side. Some fresh produce is retailed by supermarkets that are as modern and sophisticated as any in the world; some is hawked in the streets by hordes of costermongers as it has been for centuries. Some fresh produce enters the market channel through the agency of a cooperative, such as the gigantic Cotia of São Paulo; some enters through weekly periodic fairs held in rural areas where subsistence farmers bring their surplus by muleback for sale to a variety of middlemen. Some fresh produce is brought to Salvador on colorful saveiros; some arrives on

diesel trucks. Within Salvador a wide variety of outlets exists for the retailing of fresh fruits and vegetables with public markets, movable fairs, and street vendors providing an urban outlet for the produce of small farmers.

The role of the market system in agricultural development has been receiving increased attention in recent years. Milikan and Hapgood state that "Marketing is as critical to better performance in agriculture as farming itself and should be treated with equal care" (165: 61). Southworth and Johnston write, "A factor too often taken for granted is the development of an efficient marketing system linking rural supplies and urban demands" (232: 8), and Wish and Harrison maintain that "Economists have stressed the primacy of increasing industrial and agricultural productivity to the neglect of the intangible but critically important coordinating functions of the marketing system" (260: 13). The purpose of this chapter is to discuss the marketing system whereby agricultural produce moves from the rural producer to the urban consumer in Salvador.

Rural Markets

Johnson argues that three kinds of market systems are found in underdeveloped countries: dendritic, intermeshed, and contrived. The dendritic system is found in nations or regions where foreign economic interests rather than local ones determined the evolution of the urban and agricultural landscape. The basic

components of this system are a large port city market, a major inland assembly and wholesale market, and periodic local markets with their dependent hamlets. Within this system there is a proliferation of local markets, the sellers are victims of oligopsony, and the peasantry "must be content with a role that is passive, docile, and unrewarding." The intermeshed system consists of a nested hierarchy of market places that has evolved over a long period and represents the optimal situation where local economic factors have determined the urban landscape. The contrived system is a market network imposed with government assistance on a dendritic system in order to stimulate growth and serve as a "protective shield for farmers against the rapacity of village merchants, landlords, and usurers--triple roles so frequently played by the same person" (136: 86-102).

Johnson's market system typology is useful in the study of food supply for Salvador, because Brazil's first capital and its immediate hinterland could well have been the model for his dendritic system. Land use was determined by the economic interests of Lisbon, and early railroad lines were constructed to focus economic activity on the port city, rather than providing an intermeshing transportation network. The urban centers that developed within the Recôncavo constitute the elements of the dendritic market system with a port city market (Salvador), major inland assembly and wholesale markets combined with periodic local markets (Nazare, Cachoeira, and Santo Amaro), and dependent hamlets. The influence of this system is still present

and underscores the truth of Breimyer's comment that "the interchange system for farm products does not exist in vacuo--it is embedded in the political and social system of any community or nation" (36: 68).

Rural markets in northeastern Brazil remain today an integral and important element in the food distribution system. These fairs range in size from the gigantic weekly markets of Feira de Santana and Caruaru to small gatherings of townsfolk and farmers in less densely populated areas.* These weekly fairs are basically of two kinds: one designed to sell farm produce to the local urban residents, while agriculturists purchase supplies, and one designed to sell larger volumes of produce for transportation to more distant urban centers. This dissertation is primarily concerned with the latter kind, but it is not always easy to draw a sharp distinction between the two. In his study of local fairs in the Recôncavo, Motti points out that there is no clear-cut line drawn between wholesalers and retailers at local markets. This is especially true in the larger fairs, such as that at Feira de Santana (167: 10). Fairs for the local populace are usually held on Saturdays, while wholesale fairs take place earlier in the week. The following discussion describes the operation of the wholesale fairs conducted in the

*Feira de Santana, "The Princess of the Sertão," and its relationship to Salvador has already been mentioned. Caruaru, "The Capital of the Agreste," has a similar relationship with the Northeast's largest city, Recife. Cardoso has written a picturesque description of the weekly fair held at Caruaru (41).

municípios of Nazare and Jaguaquara.

Produce purchased at the wholesale fair in Nazare is transported to Salvador by saveiro. The fair is held every Wednesday and takes place between sunrise and ten in the morning to permit the boats to depart with favorable winds. Once the keystone of Salvador's food supply system, the saveiro fair is rapidly declining in importance. Five such fairs are now held each week in the Recôncavo: four on the Jaguaripe River (Nazare, about twenty-two saveiros; Aratuípe, about eight saveiros; Maragogipinho, four saveiros) and one on the Paraguassu River (Maragogipe, with an average of thirty-five saveiros). Approximately twenty-five other saveiros make a weekly run to Salvador, but instead of attending regular fairs, they pick up produce from isolated farms in the Recôncavo or on islands in the bay.

Farmers, with their mules loaded with produce, begin arriving before dawn at the Nazare docks where the saveiros are tied up. By eight o'clock the fair is at its peak, and the scene is one of absolute chaos with the entire dock area jammed with piles of farm produce, braying mules, and squealing hogs. Sweating porters move through the throng with sacks of farinha or baskets of produce on their heads, and mestres de saveiro amble from farmer to farmer tasting farinha, sampling produce, and making deals.

In spite of the apparent anarchy, an underlying order prevails and, unfortunately, it does not work to the advantage of the farmer. Because the same saveiros return each week to

the Nazare fair, some semi-permanent relationships have sprung up between mestres de saveiro and a few farmers. In these instances, the farmer will seek out the saveiro owner, and often a sale is concluded with little or no haggling and a mutual feeling of satisfaction. The vast majority of transactions, however, are conducted as buyers go from seller to seller making purchase offers. There is no outright collusion to fix prices by the purchasers. The minimum offered is the lowest the buyer can possibly wrangle from an unwitting seller; the maximum, enough to make a profit in the Salvador market. Because all buyers know prevailing Salvador prices and all seek a high profit margin, the maximum price offered by the middleman is fairly standard. With few buyers and many sellers, collusion is unnecessary. Payment is made in cash after loading. There are no written records or receipts of the transactions; most of the sellers and many of the buyers are illiterate.

There are distinct similarities and differences between the wholesale fairs of Nazare and those of Jaguaquara. Jaguaquara's wholesale fairs are held on Tuesdays, Wednesdays, and Friday with the Wednesday market being the most important. The fairs take place on a broad street facing the now abandoned railroad yard. At every fair there is a crowd of subsistence farmers standing by their baskets of produce brought in on mules and waiting to strike a deal with middlemen. But while in Nazare all sellers are subsistence farmers, in Jaguaquara they produce only a fraction of the produce sold. Many agriculturists in the area are

commercial farmers, and this has a marked influence on the marketing system. Some farmers bypass the weekly fairs altogether, either by having trucks come direct to the fields for loading and shipment or by maintaining their own storage sheds in town where truckers pick up the produce. Other commercial farmers will bring their produce to the local fairs but enter into no bargaining activity, because they have a standing agreement with a specific middleman to handle all of their produce. A final group of commercial farmers prefer to sell their produce to the middleman who offers the best price.

As there are different kinds of sellers, there are also different kinds of buyers. There are three basic kinds of middlemen at the Jaguaquara fairs: established local merchants, truck drivers, and small-time operators. The established merchants have their own local business, their own storage facilities, and some have their own trucks. Three of the largest have wholesale outlets in other cities: two in Salvador (one at São Joaquim and one at Sete Portas) and one in Feira de Santana. A fourth acts as the local buying agent for the Salvador supermarket chain, Paes Mendonça. These merchants have regular customers with whom they habitually do business, and they or their employees are present at each of the three wholesale fairs every week. Payment for produce is usually in cash at the time of purchase but at times is deferred a day or two. These buyers make a minimum of two shipments a week, and their maximum price offered the seller is based on the most recent maximum price



a. Nazare



b. Jaguaquara

Figure 13. Market Day Scenes: Nazare and Jaguaquara.

received on the last shipment. Established merchants have a series of regular customers and receive payment on delivery at times, more often a week later, and rarely as long as a month after delivery.

The other two kinds of middlemen are the truck drivers and the small-time operators. Truckers own their vehicles. Some merely provide transportation for produce at a flat rate; others are just a step below established merchants, buying from the same farmers and selling to the same customers; and a third kind is much more speculative in nature--buying from whom they can get the best deal and selling wherever their informal communications system tells them the price is best. The truckers are a transition group of middlemen between the established merchants and the small-time operators. Some of this last-named group are from Jaguaquara, but the majority arrive in town on market days from the cities of Jequié, Feira de Santana, and Salvador. Most of their purchases are made from the subsistence farmers, and their shipments are made by renting or sharing a rented truck with other middlemen. The nature of their business is highly speculative; rarely do they have regular customers at either end of the marketing channel. Purchases and sales are for cash. Lacking regular buyers, they seek the best market as do the independent truck drivers.

Subsistence farmers in Jaguaquara have some advantages not available to those in Nazare. They have better access to market information, because prices offered to commercial farmers

by merchants are common knowledge. The subsistence farmer does not receive the same price because of his much smaller volume, but he at least has some standard against which to judge the middleman's offer. Another advantage is that the presence of commercial farmers at the market attracts a larger number of middlemen. There are still many more sellers than buyers, but a more competitive situation exists in Jaguaguara than in Nazare. A final advantage lies in the small farmers' ability to sell produce at times to established merchants. These merchants buy most of their produce from regular customers who are commercial farmers. The key to their success rests on their being able to provide urban buyers with a constant and reliable source of supply. If the commercial farmers are unable to meet requirements for a full shipment, the merchants will purchase from the subsistence farmer to make up the short-fall.

The Role of the Middleman

Historically, society has viewed the middleman as a parasite, as a person who does not produce but who increases the price of goods because of the services he provides for a handsome profit. Plato wanted to assign the role of middleman to those in society incapable of performing a useful function.

Suppose now that a husbandman, or an artisan, brings some production to market, and he comes at a time when there is no one to exchange with him; is he to leave his calling and sit idle in the market place?

Not at all; he will find people there who, seeing the want, undertake the office of salesman. In well-ordered states, they are commonly those who are weakest in bodily strength and, therefore, of little use for any other purpose; their duty is to be in the market and to give money in exchange for goods to those who desire to sell and to take money from those who desire to buy. (138: 245)

The view of the middleman has changed little since Plato's day. The Wall Street Journal reported in April, 1972 that because of rising food prices in the United States "Mr. Nixon has lashed out at the food industry's 'middlemen' as the prime villains" (187).

The three institutional components of trade channels are producers, middlemen, and users. Under this definition, a middleman is any person who stands between producer and consumer, and he may perform a variety of functions (144: 2). In the food supply system of Salvador, the word intermediario, a pejorative term, generally is used to describe two kinds of middlemen: the speculative operator who purchases the surplus of the subsistence farmer and the produce wholesaler in the public markets. Both are blamed for rising food costs.

The intermediario who purchases surplus produce from subsistence farmers is pictured as a grasping and avaricious individual who cheats both rural producer and urban consumer, because he buys cheap and sells dear. The portrait is not entirely fair. This kind of middleman is in a very speculative enterprise dealing with highly perishable products. He does

not have regular customers, either at the buying or the selling end of his operation. His profit margin on an individual transaction is high, but it must be because of the nature of his business. Moreover, he plays an important role in the existing market channel, because it is only through him that the produce of the small farmer enters the regional economy.

There are reports that stall-owners in public markets who deal mainly in wholesale transactions have formed cartels and maintain prices at unreasonably high levels. Guimarães, writing about Agua de Meninos, stated that "there are 'kings' of bananas, of farinha de mandioca, of vegetables, of coconuts, of fruits. These men are very powerful and rich, even though they may be illiterate, and they control the greater part of commerce, enjoying the homage of the retailers" (119: 64). More recently, A Tarde, writing about São Joaquim, attributed the frequent increases in the cost of fruit and vegetable produce to the existence of a "mafia" that controls all commerce and "prevents small producers from placing all their produce on the market under threat of complete suspension of purchase of their excess production" (42).

The widely held belief that wholesalers in public markets maintain prices at a high level is difficult to prove or disprove, but given the existing food supply situation in Salvador, it does not seem likely that it contains much truth. Food products arrive in Salvador from a variety of geographic areas, and wholesale operations are conducted by many individuals in two

separate markets, São Joaquim and Sete Portas. To bring this commerce under centralized control under these conditions would be difficult.

The use of intermediarios as scapegoats for the food supply problem has been used as part of the rationale for the construction of the new wholesale supply center, CEASA/BA. In theory, producers will be able to bring their salable produce to this center, thus eliminating the speculative middleman. Moreover, it is stated that by placing all wholesalers under one roof, government functionaries will be able to control prices. It is doubtful that either of these forecasts will be realized. Small farmers have only mules for transportation and, as individuals, will be unable to use CEASA/BA's facilities. They will continue to sell their produce in rural markets. Furthermore, if a cartel does exist among wholesalers, uniting them at one site may serve to simplify price-fixing operations.

Seizing upon intermediarios as the cause of the food supply problem and constructing new physical facilities to reduce their influence diverts attention from the real causes of the problem. As long as the small farmer remains an atomized individual, abandoned in the morass of archaic Brazil, new physical facilities will do little to resolve problems of food supply.

Food Distribution in Salvador

Salvador has a complex food distribution system that is

undergoing drastic changes. The following major components of this system are discussed below: public markets, movable markets, costermongers (vendedores ambulantes), neighborhood stores, supermarkets, and the new wholesale center, CEASA/BA. The results of a 1965 survey of 1,258 consumers give an indication of the relative importance of each kind of outlet (Table 10).

TABLE 10
WHERE PEOPLE BUY FOOD IN SALVADOR: 1965*
(Percent)

	Cereals	Vegetables	Meat	Fish	Fruit
Public Markets	21.9	70.6	16.5	24.6	69.4
Supermarkets	59.5	15.6	7.6	11.4	10.6
Neighborhood Stores	16.3	8.6	4.3	9.5	9.1
<u>Vendedores Ambulantes</u>	0.2	3.5	0.6	16.7	8.1
Butcher Shops (<u>Acougues</u>)	0.0	0.1	69.2	1.3	0.4
Fish Markets (<u>Peixarias</u>)	0.0	0.0	.2	30.5	0.0
Other	<u>2.1</u>	<u>1.6</u>	<u>1.6</u>	<u>6.0</u>	<u>2.4</u>
TOTAL	100.0	100.0	100.0	100.0	100.0

*Source: Compiled from data contained in Centro de abastecimento atacadista de Salvador. (São Paulo: Serete, 1968).

Since 1965, the importance of public markets and neighborhood stores has declined and that of supermarkets and movable markets has increased. (In the 1965 survey, movable fairs were included under the heading "public markets.")

Public Markets

Large public markets, with both wholesale and retail functions, have historically been the most important elements in Salvador's food distribution system. With the rise of the supermarkets and the inauguration of the new supply center, CEASA/BA, their importance is now on the wane. Waterfront markets in the lower city have traditionally been the mainstays of the public market system, because much of Salvador's food arrived by sea (16: 346; 43: 98). The early 1960's found three public markets dominating Salvador's food distribution scene: Agua de Meninos, Mercado Modelo, and Sete Portas. Agua de Meninos burned down in 1964 and was replaced by São Joaquim. The Mercado Modelo went up in smoke in 1969. By 1974, ten years after the loss of Agua de Meninos, the picture will probably be completely altered. With wholesale functions concentrated in the new CEASA/BA, constructed outside the city limits, São Joaquim and Sete Portas will, at most, be local retail markets if not entirely eliminated.

Agua de Meninos.--Until it was destroyed by fire in September, 1964, Agua de Meninos for years had been the largest public wholesale-retail market in Salvador. Located on the waterfront in the lower city, the market received most of its produce by saveiro from the Recôncavo. The market had more than 1,500 permanent stalls, and up to 1,000 vendedores ambulantes operated temporary stands set up in the lanes between these stalls.

Agua de Meninos was much more than a market. It was a city within a city, and the merchant's union (Sindicato de Vendedores Ambulantes e de Feriantes) was as powerful within the market area as if it were the government of a separate state. The union maintained a police force and ran a jail. It sponsored all cleaning services and was responsible for the illumination network, the paving and maintaining of streets, and the sanitary facilities. After the fire, A Tarde described the market as "truly a subworld of vice, contraband, and crime. It was an example of the 'far-west' city, because the only laws that applied were those of audacity and shrewdness. It even had its own police force, maintained by the inhabitants who possessed one ambition only: make money" (4).

Over the years, the market area grew and sprawled out along the waterfront and inland toward the escarpment. Urban expansion in the lower city pressed hard on the market area. From the south, the need for additional facilities for ocean-going vessels caused an extension of the docks which threatened to eliminate the saveiro landing place. From the north, the construction of additional gasoline storage tanks soon placed these tanks almost within the market itself. And from the rear, the municipal government's desire to improve transportation within the lower city by adding two more lanes to the main lower-city artery, Avenida Federico Pontes, indicated that other measures would have been taken to relocate the market if the fire had not taken place.

Fire, believed to have been caused by gasoline vapor escaping from the storage tanks, broke out in the market area on September 6, 1964 and, in one of the worst blazes in the history of Salvador, almost completely destroyed Agua de Meninos. In the initial fire, 1,172 permanent stalls were destroyed; a second fire, believed to have been the work of arsonists, broke out two days later and consumed 300 of the remaining 500 stalls (25; 50; 223). The destruction of Agua de Meninos changed the food supply system of Salvador in two important respects. In the first place, the city inaugurated the use of movable fairs (93). Established as an emergency measure in the wake of the fire, these fairs are still in existence and represent an important element in the city's food distribution system.

The second important result of the fire was the decision to construct a new waterfront market at São Joaquim with an area of 20,000 square meters and space for 1,200 merchants. Water, electricity, sewerage, and street paving were to be provided by the city, and the merchants were told they could remain in São Joaquim until 1995 (91; 216). Commenting on the move to São Joaquim, A Tarde editorialized that Agua de Meninos had been a center of crime and vice as well as a market. "In the embers of the fire, this (vice and crime) should also be burned so that São Joaquim emerges as a wholesome market of essential utility to the population. The opportunity is here. And it should not be lost" (168).

Mercado Modelo.--The Mercado Modelo was constructed in 1912 with an area of 3,500 square meters in one large covered building, seventy by fifty meters. Completely destroyed by fire on February 28, 1943, it was rebuilt on the same waterfront site only to be devoured again by flames on August 1, 1969.

The Mercado Modelo was a unique market in many respects. The interior contained almost 300 permanent stalls dealing in all kinds of food products. In addition to the retail and wholesale sale of food produce, some of the stalls were devoted to barbershops, bars, restaurants, tourist items, and the sale of ingredients required in the rites of the Afro-Bahian religious cults. Much of the market's uniqueness derived from its location on the waterfront where a small enclosed landing harbor, the Rampa do Mercado, permitted the landing of food stuffs brought by saveiro from all points of the Recôncavo. Directly behind the Mercado Modelo was the Lacerda elevator, the main communication link between the upper and lower city. Produce arrived by sea, customers by elevator. Because the market was conveniently located at a nodal transportation point, its bars and restaurants became meeting places for students, intellectuals, and bohemians.

The glory of the Mercado Modelo came from its location between the Rampa do Mercado and the Lacerda: the three constituted one integrated whole. Jorge Amado wrote that "The Mercado Modelo is a world" (12: 287). Queen Elizabeth II, who had toured the market during her state visit to Brazil in 1968,

sent a telegram to the governor of Bahia expressing her sorrow when the market burned in 1969 (28). But location, key to the success of the Mercado Modelo, also led to its destruction. Increased traffic, caused by improved routes into the lower city, transformed the market into a major traffic bottleneck. The market itself was a physical obstacle to the improvement of the flow of traffic and created a situation which some regarded as intolerable.

Fires broke out simultaneously in the four corners of the Mercado Modelo in the early morning hours of August 1, 1969. An important element in the food distribution system, an obstacle to urban improvement, and "a world" all went up in smoke. The exact cause of the fire has never been determined. There is little doubt that it was arson (163; 241). There is also little doubt in the minds of the mestres de saveiro and others who still congregate at the Rampa do Mercado that the arsonists acted on instructions from the then mayor of Salvador, now governor of Bahia, Antonio Carlos Magalhães. The Jornal do Bahia reported that "In response to those who insinuated that the mayor's office itself had participated in starting the blaze, Sr. Antonio Carlos Magalhães said that if he had wanted to move the merchants of the Mercado Modelo, he would have acted as he had in the land invasions of Bico de Ferro and Ondina, never with fire" (186). One reporter mused, "Others remember Agua de Meninos and the misery of those merchants unable to get a good location in São Joaquim. Others still talk of the

Figure 14. The Rampa do Mercado and the Mercado Modelo.
(Photograph by Walter Motta, 1968.)



coincidence of two fires when neither of the markets sold combustible material" (158).

No new market was built. The Rampa do Mercado was left intact, and about thirty saveiros a week still dock there to sell produce, retail to passers-by, or wholesale to regular customers with small stores in Salvador. Parking areas, new streets, and a monument by the distinguished Bahian sculptor, Mario Cravo, now occupy the area where the market once stood. The old customs house that stood to one side of the market was renovated, christened Mercado Modelo, and is jammed with stalls that sell nothing but tourist items. Ironically, some of the souvenirs of Bahia, sold to Paulista tourists in this market, are manufactured in São Paulo (86; 143).

Sete Portas.--The market of Sete Portas, located on the reverse side of the escarpment from the bay, is one of the two remaining major wholesale-retail public markets. Like the waterfront markets, Sete Portas owes its importance to its strategic location, a site where the old major roads leading into Salvador converged. Its importance and its name, "Seven Gates," are derived from this locational advantage. Sete Portas is located on one of Salvador's most famous streets, the Baixa dos Sapateiros, that was first urbanized in the nineteenth century and still remains a major transportation access route to the upper city (211: 73). The initial locational advantage has turned into an obstacle for further development, because mounting traffic congestion makes delivery by truck increasingly difficult and time consuming.

Sete Portas was constructed in 1941 on the site where an open-air market had been operating without permanent facilities for several years. The market has 110 permanent stalls, and about 300 merchants operate from these stalls and temporary stands. Practically all produce is now received by truck, but in years past when the market had a lower wholesale volume, considerable produce was brought in from Agua de Meninos and the Mercado Modelo. Retail sales have declined, and wholesale business increased as the area of Salvador expanded and traffic made travel to the market by individual customers more difficult (224).

São Joaquim.--The São Joaquim market, constructed in 1964 to replace Agua de Meninos, has a total area of 3.5 hectares and a constructed covered area of more than 15,000 square meters. There are 1,196 stalls set up in blocks separated by narrow streets, many of which are unpaved. Stalls for fresh produce, cereals, and pottery and restaurants and bars take up 11,500 square meters of the covered space; 3,340 square meters are devoted to storage space; and 408 square meters contain stalls for the sale of meat and fish. The most common size stall is nine square meters, but many wholesale establishments have thirty-three square meters, and a few have more than forty square meters. The number of vendedores ambulantes operating within São Joaquim fluctuates from day to day and reaches its maximum on Fridays and Saturdays when up to 2,000 temporary stands may be in operation.

Two of the greatest problems of public markets are control and the provision of services. To leave control strictly to the merchants invites abuse and the tolerance of vice and crime that was so prevalent in Agua de Meninos. However, when control and provision of services are taken over by the city, financial assistance for the markets is likely to receive low priority from an administration with limited resources. The people who run the stalls are poor; their customers are poor. Unfortunately, they have no way to bring pressure on the government to provide adequate services. As noted earlier, A Tarde urged that the opportunity to build a wholesome market at São Joaquim not be lost. But the opportunity was lost, and now the removal of the market because of its unsanitary and crowded condition is advocated by the same officials who failed to provide adequate facilities.

Pressures are mounting for the removal of São Joaquim. This last waterfront market in Salvador faces the same problems of competition for space in the congested lower city that were faced by Agua de Meninos and the Mercado Modelo. This problem was increased, because the Salvador terminal for the ferry-boat service, inaugurated in early 1973, was built adjacent to the market area. The ferry links the city with the island of Itaparica where a road and bridge network connects the island terminal with Nazare. The completion of the new Rio-Bahia highway, one of the priority projects of the federal highway system, is expected to create a great demand for the ferry ser-



Figure 15. The São Joaquim Market.



Figure 16. Scenes at São Joaquim.

vice and a greatly increased traffic problem in the area of São Joaquim.

Present administration tactics are to convince the merchants to move to another site, either to another public market area to be constructed or to CEASA/BA. Thus far, the merchants have shown little enthusiasm for a move (92; 215; 217). Many take as a serious commitment the mayor's agreement, given at the time of the Agua de Meninos fire, that they could remain in São Joaquim for thirty years. São Joaquim has the locational advantage of being accessible to customers, be they the poor who purchase retail or the vendedores ambulantes and small store owners who purchase for resale. The issue had not been resolved at the time of this writing (April, 1973). In all likelihood, the city officials will eventually find a method to eliminate São Joaquim. It may not be a simple matter, however, because the merchants have the advantage of physically occupying the market area. And because the stalls are constructed in blocks rather than in one large building, one cynical but realistic bar owner, who had previously been in the Mercado Modelo, noted that "They can't burn us out of here."

Public markets perform important functions that are not widely recognized. Perhaps the most important is that of the source of cheap food. A 1968 study by the BNB showed that in Salvador the poorest 29 percent of the population spends 70 percent of its income on food, while those in the next highest income bracket, 30 percent of the population, spend 57 percent

of their income on food. This high percentage of income spent by so many in Salvador demonstrates the importance of food in the budget of the poor (Table 11).

TABLE 11

DISTRIBUTION OF POPULATION IN SALVADOR ACCORDING TO INCOME LEVEL:
1967*

	A**	I n c o m e L e v e l			E***
		B	C	D	
% of families	25	30	16	12	17
% of population	29	30	14	13	14
% of income	10	21	16	16	37
% of income spent on food	70	57	47	40	31

*Source: O consumo alimentar no nordeste urbano. (Fortaleza: BNB, 1968).

**Inferior

***Superior

A recent A Tarde article attacked the belief that food is cheaper in public markets on the grounds that lower prices are a false economy because of poor quality and low health standards. "The poor continue under the illusion that they can buy cheaper in the public markets. A hoax." The article stated that "Attracted by the illusion of low prices, the poor people of Salvador continue to go to the public markets, thus endangering their health. Dirt and disparity in prices are

constants in São Joaquim, Sete Portas, and other markets that exist in some regions of the city" (90).

The lack of hygiene is the fault of the city, because it has failed to provide the necessary sanitary facilities and services. The second complaint against public markets--the lack of standards for produce sold--is of doubtful validity. The absence of uniform standards has two distinct advantages. The first is to the small farmer who, because of the small volume produced for commercial sales, would find his access to the regional economy, limited and unremunerative though it now may be, almost completely blocked if rigid produce standards were applied. Such action would serve only to increase the force of those elements driving rural inhabitants to move to already crowded urban slums. A second advantage of unstandardized produce is to the ultimate consumer. It must be recalled that one quarter of Salvador's families spend 70 percent of their income on food; almost 60 percent of the population is spending more than half of its income on food. For this vast army of urban poor, the public markets are the most economical sources of food. They may have to be satisfied with low-quality food, but who will argue that low-quality food is worse than no food.

Another important function of public markets is their role as generators of employment. The urban population is burgeoning as a result of rural-urban migration, but there is little employment available to absorb the new arrivals. It was noted earlier that even though Salvador is greatly expanding

her industrial park, this increase in the manufacturing base creates few jobs. As a result, many of the newcomers to the urban scene, if they are to work at all, must find employment in what is euphemistically termed the "service sector." In reality this means a large percentage of the urban labor force working in such positions as lottery salesmen, shoeshine boys, messengers, domestic positions, petty commerce, and food distribution. It is almost impossible to determine the number of persons involved in food distribution in Salvador. The number working in the public markets and deriving their livelihoods from these markets is estimated to be between 4,000 and 6,000 when stall-owners, vendedores ambulantes (both those in the market and those who go door-to-door), and other workers, such as cargo handlers, are taken into account. In many instances, no individual earns very much, but many earn enough to survive.

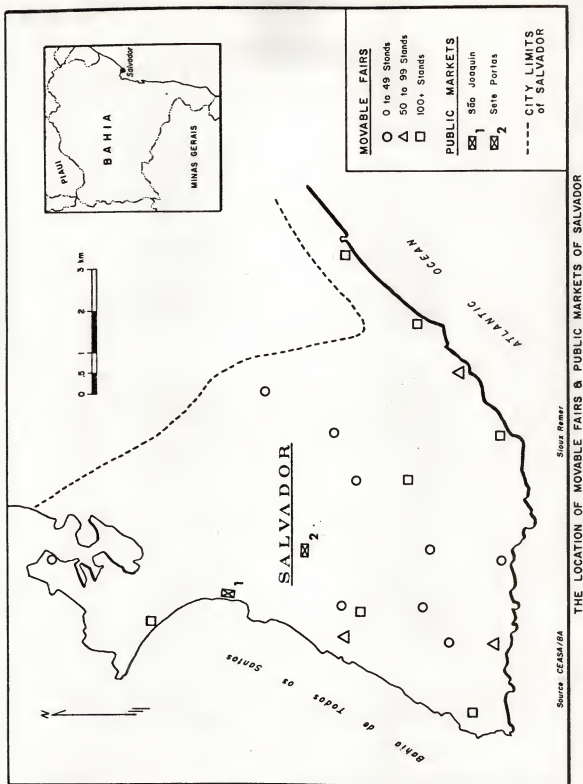
Movable Fairs

The movable fairs were established in Salvador following the destruction of Agua de Meninos by fire in 1964. In this system of food distribution, city blocks are closed to traffic and temporary stands set up on a regular rotating basis. Initiated as an emergency measure, the movable fairs are now an integral part of the city's food supply network. These fairs are held in nineteen different sections of the city and range in size from 175 stands in 2 de Julho to six in Federação (Table 12 and Figures 17 and 18). On any given day, Tuesday

TABLE 12
MOVABLE FAIRS IN SALVADOR*

Section of City	Day	Number of Stands	
1. Tororó	Tuesday	30	
2. Paranhos	Tuesday	15	
3. Pituba	Tuesday	80	125
4. Rio Vermelho	Wednesday	77	
5. Ondina	Wednesday	22	
6. Chame-Chame	Wednesday	152	251
7. Pau Miudo	Thursday	38	
8. Boa Vista	Thursday	70	
9. Canela	Thursday	22	
10. Itapoã	Thursday	62	192
11. Boa Viagem	Friday	75	
12. Barra	Friday	96	
13. Barris	Friday	70	
14. Matatú	Friday	27	
15. Ribeira	Friday	9	277
16. 2 de Julho	Saturday	175	
17. Amaralina	Saturday	107	
18. Garcia	Saturday	18	
19. Federação	Saturday	6	306

*Adapted from data contained in the February, 1973 schedule for movable fairs prepared by CEASA/BA. This schedule is prepared on a monthly basis for the use of CEASA/BA personnel, and the only information that changes from one month to the next is that contained in the "Number of Stands" column. The location of the fairs and the day of the week each is in operation is published on a daily or weekly basis by all of Salvador's newspapers.



THE LOCATION OF MOVABLE FAIRS & PUBLIC MARKETS OF SALVADOR

Figure 17



Figure 18. Movable Fair at 2 de Julho.

through Saturday, between 100 and 300 stands will be in operation in the movable fairs in Salvador, with the largest number being reached on the last days of the week.

The movable fairs are administered by CEASA/BA which provides the stands and their transportation from fair to fair. Stand operators pay NCr\$2.00 (U.S. \$0.40) a day for these services. The amount collected does not cover CEASA/BA's expenses, and the directors regard the operation as a social service. The unit in charge of the movable fairs has two trucks and a staff of sixteen (two drivers, ten laborers to set up and dismantle the stands, and four carpenters for repair and maintenance work). In February, 1973, there were 456 stand operators registered with CEASA/BA, and most were taking part in two or three fairs each week. Operators indicate on their registration forms the fairs in which they wish to participate, thus enabling CEASA/BA to have the correct number of stands at each fair site.

Fairs begin about six in the morning and last until noon. The great majority of the stands are devoted to the sale of fresh fruit and vegetables, but some sell meat, fish, and cereals. Government subsidization of the movable fairs is an excellent investment. They provide employment for a large number of people and should become an even more important element in the food distribution network as the importance of the public markets declines. By moving the fairs from section to section within the city, CEASA/BA absorbs a portion of the transportation cost to the consumer, because almost all resi-

dents of Salvador find a fair within walking distance of their home at least once a week. Farm cooperatives may rent stalls and thus approximate Plato's ideal of producer selling directly to consumer. Stand operators handle a variety of produce, and the flexibility of standards permits a final outlet for produce of varying quality, a distinct advantage both to the small farmer and the poor consumer.

Neighborhood Stores

There are about 400 small neighborhood stores operating in Salvador. Their importance is declining because of increased competition from supermarkets. Most of these stores carry little or no fresh produce or perishable items such as meat and fish. The bulk of their stock is made up of processed food and non-perishable items such as farinha de mandioca, rice, and beans. The great attraction of these stores, in addition to their convenience within a neighborhood, is that of all the retail outlets they are the only one that extends credit to regular customers. This line of credit, known as caderneta, is often extended for up to thirty days. Credit, combined with the ability to purchase small or even minuscule quantities of food on a day-to-day basis, as opposed to the standard packages sold in the supermarkets, is attractive to the poor even though neighborhood stores often have higher prices. The local stores perform a social as well as an economic function. Most sell beer and aguardiente as well as food, and this dual role of

bar and grocery store makes the neighborhood store a local meeting place for social purposes.

Supermarkets

The growth of supermarkets in Salvador has been phenomenal. The first opened in 1959; by the end of 1972, twenty were in operation, and by the end of 1976, the city is expected to have thirty-five supermarkets. By far the most important stores are those in the Paes Mendonça chain which has fourteen supermarkets in Salvador and one in Aracajú, Sergipe. It is the third largest food retail chain in Brazil and the largest in the Northeast. In terms of the number of employees, the Paes Mendonça chain is the largest business in Salvador with 2,630 workers in February, 1973. Expansion plans call for the construction of ten more stores in the next four years--nine in Salvador and one in Feira de Santana where the supermarket will compete with one of the largest weekly fairs in Brazil. A family business, the chain was founded by Mamede Paes Mendonça, who likes to portray himself as a poor country boy from Sergipe and is said to have started his business fortune by helping his father peddle goods on muleback. The other supermarkets are Unimar, run by Carlos Alberto Correa Ribeiro, and the Supermercados Vazquez chain.

Correa Ribeiro, who now has one supermarket and will have five by 1976 if expansion plans proceed on schedule, states that there are about 3,000 supermarkets in Brazil and estimates there will be 15,000 by 1975. He believes that 60 percent of retail

food sales in Salvador are conducted by supermarkets and that these outlets will have 90 percent of the food business within three years. His estimates on the sales handled by supermarkets may be a little high, but his identification of the trend is accurate.

While supermarkets in the United States evolved from low-priced, self-service, no-credit food outlets during the depression years, they arrived in Salvador as modern and as complex as their present day counterparts in this country, merchandizing up to 10,000 food and nonfood items. Salvador's supermarkets also have a high degree of vertical integration in their system; for most items carried, they have developed their own marketing channels which are independent of traditional institutions, with their own purchasing agents and distribution and warehouse facilities.

In the United States, supermarkets earn about 7 to 10 percent of their profits from the sale of fresh produce; in Salvador fresh produce accounts for only about 2 to 5 percent of the profits. Salvador supermarkets sell relatively less fresh produce because of the competition from the public markets and the movable fairs and because they have yet to develop sources of uniform produce. They rely to a great extent on São Paulo sources for a constant flow of produce supply, but practices of grading produce have not been developed to the extent that packaged uniform produce may be presented in the supermarkets as is done in the United States.

CEASA/BA

Earlier in this chapter, it was pointed out that Johnson has described three kinds of market systems found in developing countries--dendritic, intermeshed, and contrived. Not only does the Salvador system resemble the dendritic kind, but it also appears that Brazilian government policy aims at the establishment of a contrived market system. In the government's strategic development plan for agriculture and supply for the 1968-1970 period, the two stated basic objectives were:

1. Increase the production and productivity of agriculture by transforming traditional agriculture by changing methods of production and increasing the use of modern agricultural inputs.
2. Break the obstacles of supply by solving the principle problems linked to the structure and functioning of the system of commercialization of food supplies.

To carry out this second objective, the government outlined four programs: the establishment of food supply centers in every city of more than 500,000 inhabitants, the establishment of terminal markets in cities with a population range of 100,000 to 500,000, the establishment of regional markets in the zones where agricultural production is concentrated, and the creation of financial and tax incentives for food processing industries (190: 5, 399). Government action has thus far been concentrated on the establishment of food supply centers in Brazil's major cities. By the end of 1972, centers had been

completed in Recife, Brasília, Fortaleza, and Niteroi; in 1973 centers will be inaugurated in Salvador, Aracajú, Porto Alegre, Maceió, Belo Horizonte, Belem, Manaus, Goiania, Curitiba, and João Pessoa; and in 1974 supply centers will be constructed in Rio de Janeiro, Vitoria, Natal, Terezina, Florianopolis, and São Luis. (The first such center in operation in Brazil was constructed under state auspices rather than with national government support. This was the Centro Estadual de Abastecimento S/A, inaugurated in São Paulo in 1966.)

The supply center for Salvador, CEASA/BA, was inaugurated in March, 1973 and is located about twenty kilometers from the center of the city. All wholesale activities for fresh fruits and vegetables will be located at the center which has six large, covered merchandising areas for those engaged in permanent commerce and two for merchants or farmers who wish to rent selling space on a temporary basis. Each area has about 5,000 square meters of floor space, totaling approximately 40,000 square meters of covered area for wholesaling activities. Cold storage space designed to hold up to 720 tons of fresh produce may be used by the merchants. It is expected that about 440,000 tons of produce per year will be commercialized at CEASA/BA.

As of February, 1973, sixty permanent stalls had been rented, including six by cooperatives. CEASA/BA directors are not worried about filling up the space. A directive from the national government has been issued which makes mandatory fruit and vegetable wholesale operations at the supply centers

where these centers exist. Wholesalers at Sete Portas and São Joaquim may thus be forced to move to CEASA/BA if they do not choose to do so voluntarily.

CEASA/BA supporters believe it will provide the following advantages (52: 292-97):

A. Direct Benefits

1. Decrease in loss due to spoilage.
2. Development of a more rational distribution system.
3. Provide a price formation mechanism.
4. Protection of public health.
5. Because CEASA/BA will be a wholesale market only, control of movement will be facilitated.
6. By moving wholesale activities to CEASA/BA, traffic conditions in Salvador will be improved.

B. Benefits to Farmers and Agriculture

1. CEASA/BA will provide a facility where producers may sell directly to retailers, or at least to wholesalers, without the intervention of middlemen.
2. Facilities for cooperatives will be provided.
3. CEASA/BA will provide areas for the sale of farm equipment and fertilizer.

C. Benefits to Wholesalers

1. Wholesalers will have to pay more to rent space than they pay at the public markets, but they will receive greater benefits.

D. Benefits to Consumers

1. The consumer will be charged a fairer price.
2. The consumer will receive better market information.



Figure 19. CEASA/BA Under Construction.

Undoubtedly, some of these benefits will be realized. The cost of CEASA/BA's construction is estimated at NCr\$52 million (U.S. \$8.6 million). Refrigerated space will decrease spoilage; food sold will probably be more sanitary; paved areas will speed truck unloading times; and, without doubt, traffic in downtown Salvador will be less congested. However, the major disadvantage of CEASA/BA, the locational one, is not mentioned. The transportation costs to many retailers such as the vendedores ambulantes and movable fair merchants will be considerable when compared to those now existing at the public markets. It is to be hoped that the advantages to producers will be realized, but unless subsistence farmers are joined together in producer cooperatives, they will be denied the possible benefits of CEASA/BA. The operations of cooperatives are a major concern of the following chapter which deals with Brazilian politics and agricultural policies.

CHAPTER VI

POLITICS AND AGRICULTURAL POLICIES

Preceding chapters have discussed the effects of physical, historical, marketing, and transportation factors as determinants of the location of food supply sources for Salvador. The purpose of this chapter is to describe the influence of politics and agricultural policies on food production patterns. Von Thünen devoted several chapters of his work to the effects of taxation on the pattern of agricultural production, but he said little about the consequences of politics on land use. In fact, when commenting on the way in which railroads could induce the Poles to accept Russian rule, he terminated his brief discussion with the statement, "But politics must not enter my work" (120: 276).

Politics, however, must definitely enter the work of this dissertation because of its great influence on the agricultural landscape in the Northeast. The land-settlement pattern during the colonial era resulted in large landholdings, sugar plantations on the coast and cattle ranches in the interior. This land-use pattern gave rise to the formation of powerful elites, *senhores de engenho* on the coast and *coroneis* in the interior, in whose hands was concentrated almost all political and economic power. The land-use pattern of the Northeast has been

remarkably resistant to change, because the large and powerful landowners have sought to preserve their privileged status by maintaining the traditional agricultural system.

The political history of Brazil may be viewed as a struggle by the national and state governments to extend their authority over the dominant landowners who were practically sovereign in their areas of influence. This struggle has been protracted, because the failure to construct an intermeshed transportation network made difficult the extension of government authority.

Throughout the history of Brazil, the subsistence farmer, the producer of food products, has remained the marginal man in Brazilian politics. During the period of coronelismo, he was manipulated by rural political chieftains, and during the era of populism, he was ignored by politicians who concentrated their efforts on obtaining the votes and support of the urban masses. One example of a governmental action to gain support of the urban population which was detrimental to food producers was the establishment of the National Superintendency for Food Supply (SUNAB) shortly before the overthrow of President Goulart in 1964. With inflation out of control and urban discontent rising, SUNAB was intended to control food prices, but as Skidmore describes it, the recourse to unenforceable controls was a desperate measure that gave the government the illusion of activity (229: 268). This organization is still in operation, and at times in its attempts to help consumers by lowering food

prices, it has succeeded only in driving some products from the market and in discouraging agricultural production (219: 266).

Because he has never had access to political power, the subsistence farmer has never been able to exert pressure on the government to enact programs for his benefit. As a result, the food producer in the Northeast remains a part of archaic Brazil, operating in an agricultural system whose structure blocks progress and increased productivity.

To change traditional agricultural structures is also to change the distribution of political power in rural areas. For this reason, rural elites, whose power base has been eroded by the extension of government authority and the rise of potent commercial and industrial groups, strongly resist programs designed to assist small farmers. If such programs are implemented, the elites maneuver to incorporate them into their own orbit of influence. For the subsistence farmer to make the transition from archaic to modern Brazil would be a blow at the already declining power of the large landowners. In order to understand Salvador's food supply system and to prescribe policies to improve this system, a comprehension of Brazilian politics is essential. It is relatively simple to elaborate utopian programs for the improvement of the agricultural sector, but schemes promulgated without a firm basis in political reality are worthless.

National Politics

The structure of Brazil's agrarian sector has had a profound effect on the political system, and, conversely, politics has had a major impact on the agricultural system. Coronelismo was based on the politics of powerful landowners. In recent years, the flood of rural migrants to urban areas was largely responsible for the political phenomenon called populism. The gradual breakdown of the traditional paternalistic relationship in rural areas gave rise to political unrest and agitation in the countryside. In discussing national politics, the focus will be on the rise of urban populism and the decline of rural paternalism rather than on a chronological listing of specific political events. Coronelismo will be discussed under the section describing Bahian politics.

The Rise of Populism

Ionescu and Gellner, writing in 1969, point out that a decade ago many people feared that newly independent nations would go communist. It has turned out, however, that in so far as the rulers of new states have embraced an ideology, it has tended to have a populist character. They add that "There can, at present, be no doubt about the importance of populism. But no one is quite clear just what it is. As a doctrine or as a movement, it is elusive and protean. It bobs up everywhere but in many contradictory shapes" (133: 1). A satisfactory definition of Latin American populism has also been elusory.

Alba does not define populism but states that all populist movements have been inspired by Victor Raul Haya de la Torres' interpretation of Latin American reality as set forth in his populist doctrine for the hemisphere (5: 7). Gomez Hurtado skirts the issue of definition by calling populism a political style and stating that in a way populism is a state of indefiniteness: "It is generally known from whence it came, but often it is not known where it is going" (112: 15). Hennessy writes, "In its widest sense, populism in Latin America can be defined as an organizational weapon to synchronize divergent group interests and is applied to any movement not based in a specific social class" (122: 28). Perhaps the best overall definition is provided by Suarez, who writes that Latin American populism is "a coalition between a sector of the intelligentsia and the masses mobilized without distinction of social class, in which the former assume leadership by virtue of a program which includes several nationalist, anti-imperialist, libertarian, and more or less socialist proposals" (235: 6).

Although there is no universally accepted definition of Latin American populism, few would argue with Hennessy's statement that in its current usage, the term populism refers to predominantly urban movements. "Latin American urban populism has been conditioned by the premature emergence of a mass society, caused by accelerating immigration from the countryside into metropolitan centers where, under conditions of capital-intensive industrialization, jobs cannot be created fast enough to absorb the increase"

(122: 31). The adverse effect of populism on agriculture in Latin America has been described by Lambert.

The greatest harm done by the populist regimes throughout Latin America has been to widen the chasm between a chiefly urban advanced society and a chiefly rural archaic one by carrying out reforms in only a segment of each nation. Government by the upper class had preserved archaic feudal structures in the rural areas until the end of the first third of the twentieth century. The populist leaders who have followed the oligarchy have paid no attention whatsoever to rural society and have left its feudal structure untouched, while their reforms have hastened changes in the advanced urban society, thus broadening the gap between the two societies instead of narrowing it.

(141: 209)

Brazilian populism, made possible by rural-urban migration and the lack of employment opportunities in the cities, had its greatest impact in the 1950's and early 1960's, but the development of this phenomenon began with the Revolution of 1930. Scholars are unanimous in viewing 1930 as a major watershed in the nation's political history. The beginning of the era of Getulio Vargas, a gaucho from Rio Grande do Sul, marked the end of the monopoly of political power by the agrarian interests, exercised by the omnipotent coronéis of the rural areas. Coronelismo did not disappear with the advent to power of Vargas; vestiges of it still remain in some areas, but it entered a period of decline. Vargas, in the words of Jorrin and Martz, "helped to formulate and capitalize upon the populist wave" (137: 240). Views differ concerning the evaluation of the changes made under

Vargas, but no one disputes that they drastically altered Brazilian life.*

Weffort, who has written extensively about Brazilian populism, states that the Revolution of 1930 constitutes a new stage in the history of Brazil. According to Weffort, after 1930 none of the major groups--the middle classes, the coffee sector, the agricultural sectors not linked to export--was strong enough to effect a compromise resulting in the legitimacy of the government. "It was under these circumstances that a new element appeared on the scene of Brazilian history; the urban popular masses, which constituted the only possible source of legitimacy for the new Brazilian state" (256: 188).

To explain populism, Weffort compares it with the pre-1930 political-style coronelismo. The coronel and the populist leader were both leaders of masses and had the same relationship of confidence and dependence with their followers. However, coronelismo was rooted in rural areas, while populism is a phenomenon of regions affected most by urbanization. The latter's strongest bases are in the regions of the most intense capitalist development. The basic difference between the two is that

* Venancio summed up this feeling when he wrote: "With the Revolution of 1930, we entered the contemporary phase, and for the observer it is difficult to maintain a neutral and impartial position. The period is dominated by the controversial figure of Vargas who has fanatical supporters and implacable adversaries. That which is certain is that after 1930 Brazil underwent the most radical transformations in her political, economic, and social life" (247: 110). For other comments on 1930 as a turning point in Brazilian political history, see Amoroso Lima (15: 205), Lopes (147: 60), and Franco Montoro (98: 91).

coronelismo includes social and economic relationships, while adhesion of the mass to a populist leader presupposes freedom for the individual from all forms of social and economic pressure from the leader. In coronelismo politics is one aspect of the relationship; with populism, politics is the only aspect of the relationship. Coronelismo is a compromise between public and private power, while populism is the exaltation of the state, placing the state, through the populist leader, in direct contact with individuals united in the mass (257: 174).*

It is important to note that the economic development pattern of Brazil did not follow that of the present-day industrialized nations. In the latter, urbanization and industrialization were interlinked, with new arrivals to the city being employed in the industrial and manufacturing areas. Generally speaking, advancing technology in these nations tended to reduce tensions between the workers and the owners by enabling increased production and better living standards for the former without seriously challenging the power status of the latter. This pattern has not taken place in Brazil. In nations going through industrial development today, factories with imported modern technology require few industrial workers. As a result the great mass of urban dwellers--many recent arrivals from rural areas fleeing archaic agricultural practices--find themselves forced

*For further discussion of Brazilian populism, see Ianni (131), Schneider (218: 54), Skidmore (229: 67), and Weffort (258).

to survive on some form of underemployment in the service sector. Instead of reducing tensions among social classes, technology increases problems that seem inevitably to seek resolution in the political arena.

Because industrialization took place under the impact of high-technology capitalism, few jobs were available in the industrial sector for the urban population. Population growth from migration to the southern region has been estimated at over 5 percent annually for the 1950-60 decade. Industrial labor growth has been only 2.5 percent annually during the same period despite a product growth of almost 9 percent per year. Most of the migrants have found employment in petty services. Employment growth in services was 5.2 percent annually between 1950 and 1960, although real product growth in the service sector was only about 5 percent (128: 105). Cintra and Wanderley Reis have described the results of this high-migration rate to the cities combined with low-employment growth rate in the industrial sector. They contend that the urban masses consist of one small "industrialized" faction actually working in industry and another large group termed "urban" who remain on the periphery of economic development and are employed in marginal and unstable activities. "With the concentration in the cities of this growing mass of population, with its heterogeneous composition, the urban proletariat becomes the heart of the new potential politics, a characteristic of underdeveloped situations. . . . This proletariat represents an electoral force

that is the object of maneuvering by charismatic or populist leaders, apt at capitalizing on aspirations for better living standards and playing on the psychology of the urban mass which is marked by their recent rural origins and easily subjects them to manipulations of the paternalistic type" (56: 59).

In considering the emergence of Brazilian populism, the failure of political parties to incorporate the urban masses into the political system is an important factor. In the now developed democracies, political parties played a vital role in assimilating new members of the urban milieu into the political system. They proved to be effective and essential vehicles for political socialization and the aggregation and articulation of demands. Parties have never been able to successfully perform these functions in Brazil. During the First Republic, parties were local machines controlled by the agricultural elite and functioned only to further the interests of the wealthy. Abolished by Vargas with the establishment of the Estado Novo in 1937, parties emerged again in 1945. However, all major parties--the Social Democratic Party (PSD), the Brazilian Workers Party (PTB), and the National Democratic Union (UDN)--were formed either to support the continuation of Vargas' policies (PSD and PTB) or to oppose them (UDN). None had an effective national organization or a distinctive political program that would enable it to incorporate the people into the political system. Furthermore, there were a wide variety of minor parties, and the formation of party alliances at the

local level over personal and local issues confused the electorate and weakened the party system. The lack of success in imposing a national two-party system from above since 1965 indicates the difficulty in developing a viable party structure in Brazil.

Government based on populism failed in Brazil, and this failure resulted in the elimination of participatory democracy and the establishment of an authoritarian regime. Populist politics could elect a president but because of the lack of a strong organization could not provide the support required for the implementation of a governmental program. The comments of Lopes are appropriate to ring down the curtain on the populist phase of Brazilian political life. He concluded, writing in 1966: "Clearly the opposition is not to persons but to a renewal of the politics of manipulation of the urban masses. Keeping up elections without mass agitation and populism is no easy matter. . . . Alternatives are elections without populism or a power struggle, until a faction of the leaders of the April movement gets enough power to constitute a stable authoritarian regime" (147: 77). Subsequent events have proved the validity of his observations.

The Decline of Paternalism

Just as the rise of populism in urban areas altered traditional political power sources, so the decline of paternalism in rural areas threatened to modify the political structure in the countryside. Historically, political power resided in the

hands of the landowners, be they senhores de engenho on the coastal plantations or coroneis of the large ranches in the interior. Before the Vargas era, these landowners exercised complete authority within their areas of influence, an authority not challenged with impunity by the state governments.

The political power of the landowners was based on their ability to exercise complete control over the votes of their workers and followers. These votes were traded to aspirants for public office in return for economic benefits and recognition of the landowner's authority within his area. Workers voted in accordance with the landowner's instructions as their contribution to the maintenance of the paternalistic relationships. In return they received protection from outlaw bands and the private armies of other landowner's and a measure of economic security. The declining power of the coroneis was noted in 1948 by Nunes Leal in his classic work on this Brazilian phenomenon. He added, however, that "It seems evident that the decomposition of coronelismo will only be complete when there is a fundamental alteration in our agrarian structure. . . . As the agrarian structure that still exists contributes to the maintenance of coronelismo, so also does coronelismo operate to conserve this agrarian structure" (173: 188-89).

Several factors contributed to the decline in power of the landowners. Industrialization created a new economic elite. Urbanization concentrated an increasingly larger proportion of the electorate in cities where they became subject to the

blandishments of populist politicians, diminishing the value of the vote that could be delivered by a landowner. In the sugar zone, the small mills continued to be forced out of business by the large usinas. In the interior, improved transportation facilities permitted landowners to spend more time in the cities. The growth of urban areas in the countryside produced political competitors such as merchants and professional men, who could offer loans and services in return for the vote of the rural poor. With the advance of federal and state authority into the interior, the physical protection offered by the landowner assumed decreased importance. Increased mobility brought about by improved roads, relatives migrating to urban areas, and easier access to radios brought increased awareness and changing attitudes to rural inhabitants.

All of these elements tended to corrode the paternalistic relationship that for centuries had been the keystone of rural society. This change was most marked in the sugar zone where usinas, gigantic factories in the field, replaced the family mill. The highly personalized relationship between the plantation workers and the owner-administrator of his plantation, which had persisted from the slave era, was replaced on the large usinas by the impersonal employee-employer relationship of the modern industrial age (129: 22). As the paternalistic relationships broke down, people searched for security in a new set of structures and institutions.

Politicians sought new methods to control the rural

voters. Aspiring political leaders, mayors and state deputies sought to use cooperatives as an organizational mechanism for political profit. Although intended to provide small farmers, both owners and tenants, with assistance in marketing produce and purchasing supplies, cooperatives were often used in the later 1950's and early 1960's by political power seekers who saw them as devices for advancing their public careers and as a means to organize the rural electorate. Some cooperatives were formed with the sole purpose of providing a front for wealthy landowners to obtain sizeable loans at attractive interest rates to be used for a variety of purposes, not all of which were concerned with agriculture.

Rural unions and Peasant Leagues showed marked development in the 1945-1964 period in the Northeast. Galjart contends that the rural unions and Peasant Leagues came into being, because the old paternalistic relationships which had forged an owner-peasant bond had been weakened and the peasants were seeking a new relationship that would provide security (107: 11, 20). It is difficult to evaluate the origin, activity, and purposes of these movements because of the notoriety generated by the press in the United States and Brazil, which fostered the belief in some quarters that the Brazilian Northeast was on the verge of following Cuba into the communist camp. That the communists were active in rural areas is undoubtedly true. The extent of their influence is unknown.

After 1945 an active effort to mobilize the peasants took

place in many of the states of Brazil. This was mainly the work of the Communist Party. "All other political groups were simply engaged in manipulating the peasants at election time, within the political power structure dominated by the large landowners" (166: 456). These Peasant Leagues were not given official legal recognition and, following the outlawing of the Communist Party in 1947, had almost completely disappeared from rural Brazil by 1948.

In 1955 the Peasant Leagues began to reappear. The first one founded was organized by a group of sharecroppers on a plantation in Pernambuco as an association of mutual assistance. The principal goal of the association was to provide for the cooperative purchase of coffins for members who died destitute. Before the formation of the association, indigent sharecroppers who died were carried to the grave site in a public coffin. There the body was removed and placed in the ground and the coffin returned to be used at a later date by other unfortunates (40: 132-35). The motivating force behind the organization of this association is a grim reminder of the stark poverty faced by the group members. Nor is such poverty and the desire for dignity in death confined to the countryside. The candidate who received the most votes in the 1962 elections to the state legislature of Bahia was a merchant in Salvador of limited education and completely lacking in political experience. The owner of a truck, he based his campaign on the offering of free transportation to burials of the poor (206: 31).

The owner of the plantation in Pernambuco where the first Peasant League was formed initially accepted the position of honorary president of the mutual assistance association but later changed his mind and sought a court order to disband the group. The sharecroppers engaged Francisco Julião Arruda de Paula, a Recife lawyer and state deputy of the Brazilian Socialist Party (PSB), to fight their case. Julião won, and he found a cause and a political vehicle--rural political organizations.

The late 1950's witnessed the beginnings of political radicalization in the countryside. The extent of the activity has been exaggerated by outside observers, but it was significant because it called attention to the huge but previously inarticulate rural sector. "The once-quiescent countryside was awakening politically. Such a development was bound to send a shock wave through national politics, since many national politicians owed their existence to the backward political system still manipulated by landowners" (229: 208). Besides Julião and his followers, several other groups, such as the Communist Party, the Catholic Church, and the national government, were active in organizing the rural sector. A change in the legal requirements for the constitution of rural unions went into effect in 1963, and by the end of that year, 270 had been recognized and 557 were awaiting recognition. Of the recognized unions, ninety-four were in the nine states comprising the Northeast (with thirty-two in Pernambuco but only two in Bahia), and of those awaiting recognition, 221 were in the Northeast (fifty-eight in

Pernambuco and nineteen in Bahia) (188: 8). Membership in Julião's Peasant Leagues was estimated in 1962 to be 40,000 individuals in 100 different leagues (32: 378).

The power of Julião and the degree of communist influence in the rural organizations are subjects which receive varied interpretations. Concerning Julião, for example, Horowitz called him the "third force" in Brazil and compared him with Mao Tse Tung and Fidel Castro (126: 17). Leeds, on the other hand, described Julião as only one of several paternalistic representatives of popular and semi-popular social movements of great complexity in a very small part of the very large Northeast (142: 193-94).*

The true power of Julião and the Peasant Leagues remains in dispute, although it appears that Leeds' evaluation is closer to the mark than that of Horowitz. The important factor is how the Brazilian military viewed the leagues, because this assessment, correct or not, influences the present administration's attitude toward rural organizations. An indication of the military outlook is contained in General Aurelio de Lyra Tavares' book on national security.** Concerning the Peasant

* Further observations on Julião and the Peasant Leagues are found in Parson (180) and Forman (95).

** Rosenbaum and Tyler claim that the doctrine of national security "articulated by the military elite cannot be considered an ideology but, rather, a mentality. . . . Nearly all political measures undertaken in Brazil since 1964 have been justified in the rather vague notion of defending national security" (201: 12).

Leagues, Lyra Tavares writes that in the Northeast, as in Cuba, sugar plantations traditionally constituted one of the bases of the regional economy, and the large plantations were the primary target of the communists. He states that the leadership of the leagues received support from the government of Fidel Castro, including experts in guerrilla warfare and training in courses on the formation of guerrillas. "The principal objective of the so-called 'Peasant Leagues' was the enlistment of rural workers into popular militias, under the command of well-prepared communist leaders, destined to invade large properties with the use of violence which often occurred in that area." Lyra Tavares concludes:

The Communist Party raised, in order to deceive the people in its march to power, the banner of certain political and social reforms that are, in reality, urgent and indispensable. But they wished to realize them only by their methods and for their subversive goals. They would not accept them in other forms: there would be either communist reforms or no reforms.

The present government also regards these reforms as indispensable, but it wants to achieve them and has begun to achieve them, by democratic processes, by representatives of the people, and in accord with the real interests of the people. Brazil returned, with the victory of the Revolution, to the march toward her development with the preservation of the liberty of her people. (150: 271-72)

Bahian Politics

In writing about the twenty-six-year-old interventor named by Getulio Vargas to govern Bahia in 1930, Jorge Amado said:

"Juraci Magalhães arrived here almost a reactionary and left here a progressive democrat, full of human compassion. This is Bahia. No other city in Brazil maintains this spiritual equilibrium that requires of its inhabitants a constant vigilance so that they do not fall into a reactionary conservatism or an ungovernable anarchism" (12: 31). Concerning recent political history, Amado is correct. Just as Bahia is, in many respects, a geographical transition zone between the Northeast and the South, so also this state has been a political transition zone between these same two areas. The phenomenon of populism was most strongly developed in the metropolitan centers of Rio de Janeiro and São Paulo; agitation by rural organizations was greatest in the state of Pernambuco. Urban populism and peasant organizations were both present in Bahia during the 1945-1964 period but in less robust forms. During its earlier history, however, Bahia could not be portrayed as a state with a reasonable and balanced political system.

Bahia presented one of the most extreme cases of the politics of coronelismo during the period of the First Republic, 1889-1930. Political development in Brazil can be chartered within the framework of a secular struggle between privately and publicly organized power (31: 206). This framework is especially appropriate for a review of politics in Bahia, because in this state there has been a long-standing contest for authority between the official government located in Salvador and the private governments headed by coroneis in the interior.

The development of these private governments was a direct result of the pattern of settlement. The sparsely populated interior, divided into large landholdings and isolated from the coast because of the almost complete lack of transportation facilities, was outside the range of authority of the official government in Salvador. The coroneis were truly feudal chieftains who replaced the central government that was unable to extend law and authority to the abandoned and insecure sertão. These regional leaders had their own armies in order to maintain absolute authority within their domains (205: 114).

The best example of the power and influence of the coronel is provided by the career of Horacio de Queiroz Matos, who was one of the most powerful coroneis in the Northeast of Brazil in the period 1920-1930. Matos' area of authority was in the region of Lavras Diamantinas, centered on the town of Lençóis, an area roughly corresponding today to micro-region 136, Chapada Diamantina Meridional. He achieved power by defeating a rival coronel, Manual Fabricio, in 1914 in one of the most devastating of the backland wars. Victory was achieved in spite of the state government's support for Fabricio. Matos and his private army held his rival's headquarters under siege for forty-two days, successfully beating off two expeditions of state police dispatched by the governor to break the siege.

In 1920, because of dissatisfaction with the elections for state governor, Matos joined forces with two coroneis from the São Francisco Valley in an alliance to impose their candidate.

By February, civil war existed in the state with thirty municípios in revolt and the coroneis threatening to march on Salvador. The President of Brazil declared federal intervention in Bahia, and for the first time in the history of the First Republic, the national government bypassed the state authorities and entered into negotiations with the private governments of the coroneis. The federal government signed three separate peace treaties, one with each of the powerful coroneis. The treaties called for an immediate cease-fire between the coroneis' armies and the federal army; neither the federal nor the state governments could bring charges against the coroneis for revolutionary activities; the principle of uti possidetis as of March 31, 1920 was employed to determine the rulers of the municípios in revolt; Horacio de Matos was made regional warlord of twelve municípios; and the coroneis were permitted to retain their arms and munitions.

In 1926 the Prestes Column invaded Bahia, and the President of Brazil called on the coroneis in the sertão to organize volunteer groups that were known as "Patriotic Battalions." The backland chiefs were given federal contracts, money, and weapons. Pang writes that "It was the coroneis and their jagunços, not the federal army, who chased the Prestes Column through the backlands of Bahia, Goias, and Mato Grosso, up to the Bolivian frontier" (179: 265). In the Revolution of 1930, the Bahian coroneis sided with the government in power. The victory of Getulio Vargas marked the end of one phase of coronelismo in Bahian politics, but the phenomenon of the rural

coronel was to continue in an altered form.*

Within the framework of a struggle between public power and private power in Bahian politics, 1930 is a major turning point. Vargas' interventors disarmed the sertão. No longer could coroneis command large private armies. During the first Vargas era, 1930-1945, with the increasing centralization of power in the hands of the national government, the coroneis' role of political middlemen declined. But coronelismo was dormant, not dead. It emerged again after 1945, in an altered, but still potent, form. Prior to 1930 the coroneis had been absolute rulers within their areas of influence. Following 1945, the new breed of coronel was still a local power but with definitely circumscribed authority. He was generally a staunch party member, usually of the PSD or UDN, working in close collaboration with official government representatives in Salvador and receiving governmental assistance in payment for his ability to deliver the vote. With increased population and growing urban areas, complete and unchallenged dominance became more difficult.

The role of the coronel changed from that of a virtual warlord to that of a local political party chieftain, but the role of the rural voter remained much the same. The poor rural voter continued to be manipulated by local leaders, exchanging

*The description of the career of Matos is based on Barbosa (26), Feijó (89), Pang (178; 179: 139-97), and Sampaio (205: 109-15).

his vote in return for the favors of the local boss. Sampaio has identified three kinds of voters: the indifferent, the tutored, and the independent. The first two constitute the largest segment of the electorate. The indifferent does not bother to vote, and the independent attempts to make a rational decision concerning the best candidate. The tutored voter turns out in great numbers for elections,

But he does not know why he votes nor for whom he votes. He knows only with whom he votes. Those who have had the experience of asking rural workers for whom they voted for President of the Republic, Governor, or Congressman must have heard many times the same response: "I voted with Coronel Fulano (the local chief)." They don't give the names of the candidates many times because they do not know them or because they do not know for whom they voted. Perhaps they did not even have the curiosity to look at the ballot given to them and that they automatically placed in the ballot box Voters of this kind contribute most to create a great distance between our electoral system as it appears in law and that which functions in reality. (207: 37-38)

Urban populism and rural agitation were not as strong in Bahia as in other parts of Brazil, but the state's political system was gradually changing. More and more voters were exercising independent judgments on candidates for the executive positions of President, Governor, and Mayor, traditionally regarded by the average voter as much more important than legislative positions. Sampaio saw the emergence of populism in Bahia from the positive viewpoint. He noted that candidacies for public office launched in banquets held by the leading party

where the candidate did little more to campaign than read his platform behind closed doors was now a part of the aristocratic past. The modern campaign had become a marathon of physical resistance, loquacity, and good disposition. Instead of being imposed from above, the modern candidate, to be successful, had to build his campaign from the bottom upwards, making appeals everywhere to local chiefs, to men and women, to political parties and labor unions. Sampaio noted that in questioning voters, many explained their choice based on simplistic and personal reasons rather than objective analysis, but this stage of democracy could be regarded as a kindergarten of citizenship. "For better or worse, with or without satisfactory arguments from the point of view of logic, the selection of the candidates is being made by the voter and not by the ward boss or the coronel" (207: 58).

The Revolution of 1964 has made some alterations in the Bahian political system. Populist politicians no longer have an opportunity for election to the key positions of state governor or mayor of Salvador, because the governor is elected by the state legislature and, in turn, appoints the mayor. The political parties that functioned between 1945 and 1965 have been abolished and replaced by the ARENA and the MDB. But outside the fact that one is called the party of the government and the other the party of the opposition, differences between the ARENA and the MDB in Bahia are practically nonexistent (204: 122). In the power contest between public and private

governments, the Revolution of 1964 has provided an added advantage to the official government, because the governor no longer needs voters delivered by *coroneis* to get elected. He cannot ignore the leaders of the interior, however, because a strong majority of his followers in the state assembly will give him his election and an administration encumbered with a minimum of embarrassment. For this reason it is only natural that he manipulate programs and projects to strengthen his backers. The relationship remains that succinctly expressed by the Brazilian saying, para os amigos pão, para os inimigos pau (bread for friends, the stick for enemies).

Agricultural Policies

In his recent book on Latin American landholding systems, Feder declares that "Two groups with almost irreconcilable views confront each other today on the subject of agricultural development: the technocrats and the reformers." Both groups want to improve the performance of Latin American agriculture as well as the welfare of the farm population, but they propose diametrically opposite policies. Feder maintains that the elite-oriented technocrats seek agricultural development by channeling more resources, including modern machinery, into the agrarian sector and by improving farm management, but without making major changes in the agrarian structure. The peasant-oriented reformers regard the existing agrarian structure as an almost absolute

barrier to the efficient use of technology and believe that the elimination of this structure is a prerequisite to agricultural development (88: vii-ix, 270-71).

Feder's argument provides a useful framework for re-viewing Brazilian agricultural policies. Although Brazil has invested considerable effort in the improvement of agriculture, many of these programs have been beneficial only to the large and wealthy agriculturists. As Baer points out, there was little planning or even discussion about changes in the structure of agriculture in Brazil until the 1960's. Only since 1961 has there been widespread talk and some agitation for agricultural reform. Pressure for reform was partially due to social inequalities resulting from patterns of land ownership in certain parts of the country and partially due to the problems created by food shortages in urban areas which also resulted in social tensions (23: 160). In his analysis of Brazilian agricultural policy in the 1950-1967 period, Smith divides the policies into four areas: (1) investment in marketing facilities, the keynote of agricultural policy during the 1950's, (2) subsidization of modern inputs, primarily fertilizers and farm machinery, (3) the emphasis in the 1960-1965 period on a massive increase in credit granted by official banks to agriculture for cultivation expenses, and (4) the implementation, beginning in 1963 under President Goulart, of a minimum-price program for basic commodities (excluding coffee, sugar, and cacao). Smith concludes that if Brazil is to reduce the ever-widening gap between industrial and

agricultural per capita income, the emphasis of policy must change from the manipulation of market incentives (although they should not be abandoned) to "direct action on structural factors retarding the modernization of agriculture: poor rural education, ineffective research and extension, and perhaps even the land tenure structure" (231: 213-14).*

Equitable distribution of the land is of vital concern to the restructuring of the agrarian structure. Emphasis here, however, is given to other required reforms, more prosaic perhaps, but nonetheless essential. These reforms, which include agricultural extension services and the formation of cooperatives, will be required even if the Program of Land Redistribution (PROTERRA), enacted by the present national administration, is a resounding success. If the present land redistribution program falters, the projects discussed will still produce beneficial results for the small farmer, augment the supply of food to urban areas, and stimulate regional development policies for the Northeast.

National attempts to assist the Northeast have existed from 1877 to the present. The original problem of the Northeast, and for a long time the only one clearly perceived, was the phenomenon of repeated drought. The first federal agency to combat the drought problem, the Inspectorate of Works Against the Droughts, was established in 1909 and, with slight changes in name, has remained in operation ever since. (This agency is

* Other discussions of Brazilian agricultural policy have been written by Nichols (170) and Schuh (219).

now known as the National Department of Works Against the Drought (DNOCS).) With the establishment of the Inspectorate, there was general agreement about the basic strategy to be followed. The principal role in solving the problem was to be played by scientists and engineers. The engineering approach consisted of three basic programs: public works, emergency relief measures, and emigration. Public works and emergency relief measures were avidly sought by the coroneis and politicians who used these programs to strengthen their positions. Paulson wrote that the drought was not only a physical and social phenomenon but also had been integrated into the political system as well (181: 34). The policy of encouraging emigration met with opposition. Traditional rural powers were against emigration because it deprived them of obedient voters and cheap labor. One result of the conflict over this policy was to reinforce the support for road construction projects. Traditional powers saw roads as a means to improve their economic position, while those planners advocating emigration saw road construction as a method to facilitate indirectly departure from the area.

The engineering approach made life in the sertão more tolerable during normal years, thus attracting a larger and more sedentary population, which set the stage "for a catastrophe of ever larger dimensions should a bad drought occur" (124: 35). In 1952, with the establishment of the Bank of Northeast Brazil, a new era began in the efforts to revitalize the Northeast. The BNB was designed to extend agricultural credit but has

considerably expanded its range of activities. A new strategy was evolved--an economic development approach--which sought integrated solutions to the problems of the entire Northeast (197: 70). SUDENE was established two years after the 1957 drought to give further impetus to the development approach. The goals of this agency are the following:

1. Intensification of industrial investments, with a view to creating sources of employment in urban areas.
2. Changing the agrarian structure of the humid coastal area, aimed at a more intensive utilization of the land, so as to increase the productivity of the sugar economy and allow the establishment of family units specialized in food production.
3. Progressive change in the economy of the semi-arid zones, by increasing productivity and bringing it more into line with ecological conditions.
4. Shifting of the agricultural frontier, so as to integrate the humid land of southern Bahia and that of Maranhão into the economy of the region and opening up through the latter state a highway of access to the Amazon.

(24: 284-85)

The establishment of the BNB and SUDENE marked a shift in emphasis to the economic development approach. The engineering approach was not abandoned, however. Two regional agencies whose primary mission is irrigation development, DNOCS and SUVALE, continue to function in the Northeast.

It is difficult to ascertain the extent that political considerations influence decision-making processes of the

regional development agencies, but based on past experience it must be assumed that it remains a factor. Celso Furtado, the head of SUDENE until ousted by the Revolution of 1964, noted that federal agencies were under the control of local political groups that were difficult to dislodge. He considered the control of the federal administrative machinery by these local groups a serious obstacle to long-range development (106: 261). Hirschman and Sampaio have commented upon the extensive influence of a federal deputy from the backlands of Bahia on the operations of federal agencies in the São Francisco valley from 1947 until his powers were curbed by the President in 1960 (124: 80; 207: 84).

The results indicate that programs of financial assistance are strongly biased in favor of industrialization and those agricultural programs which, in Feder's classification, would be the work of technocrats rather than reformers. In the 1960-1966 period, SUDENE gave priority to road transportation, electrical energy, and industry. More than 70 percent of all investments were concentrated in these three areas with only very slight changes in emphasis after the Revolution of 1964 (Table 13). Emphasis on industry continues in spite of the fact that modern industry generates few jobs. The BNB declared in 1971 that accelerated development plans for the Northeast in the next few years were based on a great expansion of the industrial sector. This industrial growth will, the BNB states, increase demand for agricultural products, thus stimulating

TABLE 13

PERCENTAGE DISTRIBUTION OF PUBLIC INVESTMENT BY SECTOR OF
ACTIVITY: SUDENE, 1960-1966*

	1960	1961	1962	1963	1964	1965	1966
1. Agriculture, Forestry, and Fishing	8.5	6.3	5.0	6.4	4.6	3.9	4.3
2. Mineral Extractive and Transformation Industries	27.4	33.0	25.7	34.0	34.8	27.3	22.6
3. Electricity, Water, and Sanitation	14.5	14.1	15.3	12.5	22.5	28.7	24.5
4. Transportation, Communication, and Storage	34.5	30.1	37.1	28.6	18.9	24.2	30.9
5. Public Administration	9.8	10.6	11.6	12.2	11.2	8.5	10.8
6. Services (Education and Health)	5.0	5.8	5.2	5.2	6.9	6.5	6.2
7. Other	<u>.3</u>	<u>.1</u>	<u>.1</u>	<u>1.1</u>	<u>1.1</u>	<u>.9</u>	<u>.7</u>
	100	100	100	100	100	100	100

*Source: Quatro plano diretor de desenvolvimento economico e social do nordeste: 1969-1973 (Recife: SUDENE, 1968).

growth in the agricultural sector (195: 71).

The rationale for policies has been that basic reforms would be ineffective unless the Northeast were first provided with an adequate infrastructure. Even if this attitude is correct, the time is now past when a secondary role may logically be applied to the development of the human-resource base of the region. The institutional organizations for research, extension,

and the development of cooperatives are already established but are programs of low priority. These projects should now be refined, their financing increased, and their importance stressed.

Research

Agricultural research in the Northeast is conducted by several government organs. At the federal level, the Ministry of Agriculture maintains two agricultural research institutions. The Animal and Agriculture Experiment and Research Institute of the Northeast (IPEANE) has its headquarters in Recife and operates seven experiment stations--three in Pernambuco and one each in the states of Ceará, Rio Grande do Norte, Paraíba, and Alagoas. The second national agency is the Animal and Agriculture Experiment and Research Institute of the East (IPEAL), with headquarters in Cruz das Almas, Bahia, and nine experiment stations in Bahia and four in Sergipe. SUDENE does not have a research staff but maintains contracts with organizations and universities to do studies in a wide range of fields. DNOCS and SUVALE also sponsor research. The BNB, through its Department of Economic Studies of the Northeast (ETENE), Rural Department (DERUR), and Sector of Agricultural Investigations (SIA), conducts studies and issues publications. Schools of agronomy of federal universities located at Fortaleza, Ceará; Recife, Pernambuco; Cruz das Almas, Bahia; and Areia, Paraíba do agricultural research, primarily through contracts with SUDENE, DNOCS, and the BNB. Several institutions are devoted to research concerning export crops.

Rural Extension Services

Rural extension services in Brazil are provided primarily by the Brazilian Association of Credit and Rural Assistance (ABCAR). ABCAR was developed in 1956 to coordinate rural extension services in the different states; each state affiliate is independent and autonomous and carries out its own programs. In the Northeast, the extension services of the several states have joined together to form the Northeastern Association of Credit and Rural Assistance (ANCAR) which is linked to ABCAR. The state units are nonprofit civil societies and, although cooperating with the government, are not part of the government.

The ABCAR program originated in the state of Minas Gerais in 1948 when the first such extension organization was established, the Association of Credit and Rural Assistance (ACAR) (196). ACAR was set up as a nonprofit, civil society with financial backing from the American International Association. The program was such a success that by 1960 foreign financial assistance was no longer required and by 1970 similar organizations were functioning in twenty states and the Federal District with offices in 1,053 municípios. Nine states had extension offices in more than fifty municípios: Minas Gerais, 215; Santa Catarina, 129; Rio Grande do Sul, 94; Paraná, 69; Ceará, 65; Pernambuco, 50; Goiás, 55; Paraíba, 52; and Rio de Janeiro, 50 (19: 615). São Paulo is not a participating member of ABCAR but maintains its extension program through a series of Casas de Lavoura. The growth of ABCAR is impressive, but it should be

noted that in 1964 ABCAR had 1,005 technicians in the field in sixteen of Brazil's twenty-three states, while São Paulo had 873 technicians operating under the Casas de Lavoura in just one state. Smith notes that both research and extension are good in São Paulo where the Agronomic Institute at Campinas and the extensive network of the Casas de Lavoura are among the most effective in Latin America (231: 216-18). In 1969, ANCAR had a total of 769 technicians in the nine states of Northeast Brazil (Table 14).

The Bahian affiliate of ANCAR, ANCARBA, has had until recently a relatively small operation, but plans were underway in early 1973 for a period of rapid expansion. With an average of forty field agents during 1969, ANCARBA had 100 in October, 1972, and expected to have 200 by mid-1973 and 400 by mid-1974. The primary impulse for the expansion will come from contracts from PROTERRA to supplement ongoing ANCARBA contracts with SUDENE, DNOCS, and SUVALE. The number of regional offices, eleven in October, 1972, will be increased. ANCARBA, as a nongovernment agency, is better able to avoid becoming entangled in bureaucratic snarls and is less susceptible to political pressure than state and federal government bodies. Moreover, ANCARBA sets its own pay scales and can pay higher salaries, giving it the opportunity to attract higher calibre people and avoiding a high rate of personnel turn-over. For example, in October, 1972 an agronomist working for ANCARBA received NCr\$2,100.00 per month; an agronomist with the state department of agriculture, NCr\$1,600.00.

TABLE 14
RURAL EXTENSION SERVICES IN THE NORTHEAST: 1969*

State	Total Offices***	Municipal Offices	Municípios Reached		Technical Personnel		Families Reached
			Number	% of Total in State	Total**	In Field	
Maranhão	22	19	21	16.3	44	36	2,607
Piauí	23	19	29	25.4	41	31	5,638
Ceará	73	63	73	51.4	157	132	7,752
Rio Grande do Norte	49	42	76	50.7	95	78	6,774
Paraíba	58	50	149	87.1	113	99	16,580
Pernambuco	72	60	74	45.1	186	163	12,581
Alagoas	21	18	37	39.4	44	37	1,663
Sergipe	20	18	29	39.2	32	21	5,749
Bahia	46	40	40	11.9	54	48	1,465
TOTAL	384	329	528	38.4	767	645	60,809

*Source: A agricultura no nordeste (Fortaleza: BNB, 1971).

**Includes technical personnel in state headquarters.

***Includes regional offices.

Cooperatives

A BNB publication states that in the early 1950's there was a crisis in the cooperative movement in the Northeast. Before 1959, state offices whose mission was to assist cooperatives were dominated by politics, as were the cooperatives themselves. In addition there was a lack of technical personnel, a lack of planning, poor administration, and poor structuring of the cooperatives (3: 93). A 1972 communication by the Division of Cooperatives of Bahia's Secretary of Agriculture (DCOOP) declared that "The cooperatives of Bahia are presently in a phase of predevelopment, leaving behind the chaotic situation in which they were mired" (191: 3). DCOOP officials state that ten to fifteen years ago, cooperatives were used almost entirely for political purposes. They were formed to be an integral part of the political machines of local leaders. A SUDENE report concludes that for cooperatives in the Northeast to be successful, they must overcome the negative consequences of twenty years of a badly operated cooperative system (20: 24).

This background of political manipulation and mismanagement explains a good deal about the present situation of the cooperative movement in the Northeast. Many of the cooperatives that are registered are not functioning, and many of those in operation are in a precarious condition. In Bahia the official registrations of about 180 cooperatives were cancelled during the year 1971, and DCOOP officials cancelled the registration

of another fifty during 1972. In 1971 only two new cooperatives were established in Bahia. DCOOP officials estimated that about sixty cooperatives in the fields of cattle raising and agricultural production were registered in October, 1972, and about half of them are functioning.

Past political interference and poor management have adversely affected the cooperative movement. The machinations of local political leaders in cooperatives combined with the government's wariness of rural organizations because of real or imagined threats of subversion have caused the administration to be considerably less than enthusiastic about assistance to cooperatives. The small and poorly paid staff of DCOOP in Bahia is an indication of the lack of official support (Table 17). Furthermore, small farmers who were members of the earlier cooperatives that were mismanaged and riddled with political influence are very reluctant to become members of another cooperative.

The legacy of the past makes even more difficult the laborious task of forming a successful cooperative movement in the Northeast. The director of DCOOP in Bahia states that the two biggest problems in developing the cooperative movement are the lack of leadership in rural areas and the lack of a consciousness among rural people of working together.* It is extremely

* In rural Brazil there is a certain tradition of collective work called mutirão which consists of reciprocal agricultural labor during times of planting and harvesting (53: 85). This tradition has never been strong, however, and Caldeira's investigation of the subject indicates that it is becoming even weaker (39: 84, 90).

TABLE 15
SITUATION OF COOPERATIVES IN BAHIA AND THE NORTHEAST: 1963-1968*

Year	Total Cooperatives Registered	Number Cooperatives Functioning		Number Cooperatives Paralyzed		Number of Mem- bers of Function ing Cooperatives	
			%		%		
1963	Bahia	373	56	15	317	85	22,251
	Northeast	1,560	704	45	855	55	302,111
1968	Bahia	372	54	14	318	86	19,723
	Northeast	1,622	743	46	879	54	363,766

*Source: Avaliação preliminar do desenvolvimento do cooperativismo do nordeste (1963-1968) (Recife: SUDENE, 1971).

TABLE 16

OPERATING CONDITIONS OF FUNCTIONING COOPERATIVES IN BAHIA BY
DATE OF ESTABLISHMENT AS OF MAY, 1972*

Date of Establishment	Number of Cooperatives	C o n d i t i o n		
		Total	Bad	Average
1937-1949	12	5	5	2
1950-1959	15	7	7	1
1960	9	6	1	2
1961	1	1	-	-
1962	1	-	1	-
1963	3	-	3	-
1964	2	-	2	-
1965	1	-	1	-
1966	3	1	2	-
1967	3	2	1	-
1968	16	11	5	-
1969	16	5	8	3
1970	15	6	9	-
1971	2	-	2	-
1972	-	-	-	-
TOTAL	99	44	47	8

*Source: Adapted from statistics contained in "Programa para o convenio INCRA--Secretaria da Agricultura" (Memorandum dated May 15, 1972 from the Secretary of Agriculture to INCRA on file in the DCOOP office in Salvador.)

TABLE 17
PERSONNEL OF DCOOP, BAHIA, MAY, 1972*

Position	Salary (NCr\$ per month)**	Number Employed
Agronomist	1,600.00	5
Accountant	1,600.00	4
Social Worker	1,600.00	1
Technician in Accounting	600.00	5
Technician in Cooperatives	600.00	1
Technician in Agriculture	500.00	1
Typist	288.00	1
Driver	300.00	1

*Source: "Programa para o convenio INCRA--Secretaria da Agricultura" (Memorandum dated May 15, 1972 from the Secretary of Agriculture to INCRA on file in the DCOOP office in Salvador.)

**\$US1.00 = NCr\$6.00

difficult to find personnel with administrative and managerial abilities in a rural population that is largely illiterate. Moreover, not only do rural people generally lack the custom of working together for a common goal, but many feel that they have been victimized by outsiders or outside agencies; hence they must be convinced that the formation of a cooperative will provide advantages. As a step to reduce the first problem, DCOOP hopes to begin an experiment in 1973 which will involve a training program for leaders selected by the cooperatives.

The pilot project will consist of a four-month training program for fourteen leaders. Three months will be devoted to class work, and one month will be spent observing the operations of a functioning cooperative. DCOOP hopes to obtain sufficient funds to permit payment of a monthly salary of NCr\$700.00 to the leaders when they return to their cooperatives. The first year, DCOOP will pay the entire salary, with the state's contribution decreasing by 25 percent per year until the entire salary is paid by the cooperatives.

To overcome the second problem, DCOOP hopes to increase awareness of the value of cooperatives by the distribution of literature and by radio propaganda. A course of thirty hours has been designed to be presented by radio stations in one-hour segments covering such subjects as the doctrine of cooperative movements, the benefits of cooperatives, cooperative credit, the commercialization of products, and cooperative leadership. The idea is for groups of about twenty to get together, listen to the programs, and discuss the broadcast. Unfortunately, the program is carried by only one station, located in Feira de Santana, and broadcast time, 06:30 AM on Sunday morning, cannot be regarded as prime time for getting a listening group together. DCOOP also publishes and distributes a wide variety of publications concerning the purposes of cooperatives, the advantages of being a member of a cooperative, and basic manuals regarding cooperative operation and management. These pamphlets are written in simple

terms and are illustrated with cartoons to bring their message to people with little education. The problem is, of course, that many people in rural areas have no education whatsoever.

Cooperatives composed of agricultural producers offer many advantages. Two advantages should be given special emphasis--facilitating the flow of produce from farmer to consumer and providing a channel for credit to move from established institutions to the farmer. A cooperative creates a large volume of produce that is constant and reliable, thus opening marketing avenues not available to the small producer acting as an individual. The end result should be higher benefits to the producer at no added cost to the consumer, because the cost of services provided by middlemen is reduced due to diminished risk. Moreover, the middleman may be eliminated entirely if the cooperative is prosperous enough to transport its produce to Salvador to use the facilities of CEASA/BA or the movable fairs.

Cooperatives not only facilitate movement of produce from farmer to consumer, they also expedite movement of credit from banks to the small landholder. Two recent BNB publications comment on this role of cooperatives. One states that the utilization of cooperatives as the nuclei for the distribution of credit to farmers is, perhaps, the best method to increase the penetration of credit in the interior of the state. The report adds that the limited number of cooperatives with satisfactory organization and administration has not per-

mitted a greater expansion of credit. This report concludes that the extension of agricultural credit to the thousands of small landowners is an impossible task to be accomplished by the banks because of the innumerable difficulties and the high costs involved (3: 93-94). Another BNB publication sums up the situation with the statement that "In reality, a well-structured and well-equipped cooperative constitutes the ideal vehicle for the dissemination of rural credit"(195: 136).

From the small farmer's point of view, the obstacles to obtaining credit as an individual are formidable. To get credit, the farmer must have some kind of collateral, and most often there are only two kinds--the deed to his land or insurance on his crop. The small farmer will not surrender the deed to his land. For the small farmer, his land is his most precious possession; he will not jeopardize it on the gamble that bank credit will improve his lot. He thinks in terms of possible loss, not in terms of possible gain. To get crop insurance, that may also be used as collateral, he must have a crop that has a minimum price guaranteed by the national government. Because only a very few crops have this guarantee, this approach is seldom available.

Cooperatives in Bahia could be a positive force for improved agricultural production. To be effective, the present system must be greatly reinforced and expanded. The formation of numerous small and efficient cooperatives will be difficult enough, but the task is to eventually weld these units into

fewer but larger producer agglomerations. The transportation and marketing changes of the past twenty years make this imperative. To be effective, Bahian cooperatives must be able to compete with such cooperative behemoths as Cotía in São Paulo with its thousands of members and its highly efficient marketing, managerial, and administrative system. Cotía, the source of much of the São Paulo fresh produce that reaches the Salvador market, was founded in 1921 by a group of eighty-three Japanese potato farmers. Fifty years later it was the largest and most successful cooperative in Brazil with more than 11,000 members, about half of them of Japanese ancestry, located in more than fifty municípios in São Paulo, Paraná, Minas Gerais, and the state of Rio de Janeiro.* The obvious first step is to strengthen cooperatives at the level of the município, but the ultimate objective must be to have cooperatives with membership available to all producers in a micro-region or several micro-regions.

Rural Education

One of the most potent forces precluding movement of the small farmer from archaic to modern Brazil is illiteracy. The illiteracy rate in Brazil was about 26 percent at the beginning of 1973, but in some rural areas it still ranged as high as 60 percent or more. A promising program to combat illiteracy

*The description of Cotía is based on Ando (17) and Saito (202; 203).

in Brazil is now underway. The Brazilian Literacy Movement (MOBRAL) began in 1967 and is the most recent of a series of campaigns to attack the problem of illiteracy that began in 1947. To be illiterate in Brazil is to be denied suffrage. Moreover, it is difficult for the illiterate to grasp the advantages of joining a cooperative; to be a thoughtful, participating member of a cooperative; or to use the services of ANCARBA.

Previous literacy campaigns faltered and failed for a variety of reasons, including the lack of adequate funds. MOBRAL appears to have profited from the mistakes of its predecessors, and the use of this experience, combined with sufficient finances and competent leadership, bid fair to make the present effort a successful endeavor. MOBRAL's goals include the reduction of illiteracy to 10 percent of all Brazilians in the age bracket of twelve to thirty-six years by 1980. More than three million Brazilians have learned to read and write under this program (Table 18).

MOBRAL began operations in Bahia in October, 1970, and two years later, 16,000 adults in Salvador had satisfactorily completed the six-month course. Although MOBRAL is concentrating its initial efforts in urban areas, because it is easier to locate, motivate, and educate illiterates in the cities than in the countryside, rural municípios have also been encouraged to participate in the program. By October, 1972, 286 of Bahia's 336 municípios had signed contracts with MOBRAL to

TABLE 18
MOBRAL ACTIVITIES: 1970-1972*

Year	Municipios with Contract with MOBRAL	Students Predicted in Contract	Students Made Literate	% Enrolled Made Literate
1970 (2 semesters)	613	510,340	169,943	33
1971	3,405	2,569,862	1,139,509	44
1972	3,669	4,274,624	2,222,500	52

*Source: Mario Henrique Simonsen, "O MOBRAL e os utopistas," Jornal do Brasil
(March 1, 1973).

initiate literacy programs in their areas. In 1971 the Bahian municipio with the greatest participation in the program was Jaguaquara.

Critics of the program point out that in many instances the graduate of the MOBREAL program can do little more than write his name and read the most elementary of written passages. The able director of MOBREAL, Mario Henrique Simonsen, is acutely aware of this fact but states that it should be remembered that there is something worse than merely making a person literate--that is to leave him illiterate (225). MOBREAL aims to go beyond the basic goal of literacy and has a program to concentrate the four years of primary education in a twelve-month course. In 1972, 880,000 adults were enrolled in this program.

Greater emphasis on changing agrarian structures through research, education, extension services, and cooperatives provides promise for improving the life of the small farmer, increasing the supply of food for urban areas, and strengthening regional development. The obstacles to rural development--to making the small farmer an economically viable member of the regional economy--are great, but revitalization of the primitive agricultural system of the food producer is a sine qua non for the accomplishment of this goal.

CHAPTER VII

CONCLUSIONS

In the presentation of this dissertation the von Thünen model for land use around an urban area has been used as an analytical tool to facilitate understanding of the agricultural patterns that have developed around Salvador. Actual land use in Salvador's hinterland is much different from that depicted in the von Thünen model. The differences, however, are caused by the divergencies between the real conditions in Salvador and those hypothesized for the Isolated State. Comparing the land-use patterns around Salvador with those of the von Thünen model and, at the same time, contrasting the conditions which affected agricultural development in Bahia with the assumptions stipulated by von Thünen makes possible an easier comprehension of Salvador's food supply network. Von Thünen's model remains an excellent analytical tool for the study of agricultural patterns in developing nations.

As was explained in the introductory chapter, actual location of agricultural patterns must be distinguished from that of rational location, because the two need not coincide. It has been contended in this dissertation that an approximation of the von Thünen pattern represents rational land use for

Salvador at this stage of regional and national development. Whether an agricultural pattern is rational or not depends on the point of view. The viewpoint adopted in this dissertation is derived from Brazil's stated national goals of bringing about balanced development within the nation's diverse regions, thus achieving economic and social progress. To accomplish these goals in the Northeast, one of the most underdeveloped regions of this vast nation, an approximation of the von Thünen model indeed represents a rational scheme for land use. By an approximation of the von Thünen model is meant, in this context, the production of food supplies in proximity to major urban areas rather than reliance on food imports from the South.

Von Thünen's model for land use was rational for the Isolated State because of his assumptions and because of the great influence of transportation costs on the location of agricultural production. A pattern resembling that developed by von Thünen is rational for developing regions, for entirely different reasons. An approximation of this pattern is desirable when balanced growth and economic and social progress are the ultimate goals. The production of horticultural products in proximity to the urban areas where this produce is consumed is a major contributory factor to the accomplishment of these purposes. Because of the transportation revolution, production areas will not necessarily be arranged in concentric rings, but horticultural production areas will be developed in the hinterland of the city.

There are other models for agriculture. One is the development of highly specialized agricultural regions as has occurred in the United States and other industrialized nations. This kind of model appears to be the basis for the assertion of Nicholls that Brazil must look to medium and large farmers as the source of food supply. Nicholls maintains that the poverty problem of rural workers should be solved by making it possible for them to move out of agriculture and into more productive nonagricultural employment, not by fixing them on the land (169: 38-39). The fatal flaw in this recommendation is that employment for the rural poor in nonagricultural activity is, in this case, clearly nonexistent.

For centuries the plight of the small farmer driven from his land has been described in poetry and in prose. The Deserted Village, written by Goldsmith in 1770, portrays one result of the Enclosure Acts.

While, scourged by famine from the smiling land,
The mournful peasant leads his humble band;
And while he sinks, without one arm to save,
The country blooms--a garden, and a grave.

(111: 139)

Steinbeck's The Grapes of Wrath depicts the flight of the Okies.

And the dispossessed, the migrants, flowed into California, 250,000 and 300,000. Behind them new tractors were going on the land, and the tenants were being forced off. And new waves were on the way, new waves of the dispossessed and the homeless, hardened, intent, and dangerous.

(234: 318)

The situations of the British yeoman and the American Okie were desperate, but at least their dispossession occurred at a stage in their nations' development when some could eventually find employment in industry and manufacturing. Brazil and other developing nations are not passing through this stage of industrialization. Industries in these nations are capital-intensive and use the most modern and complex technology available. As a result, very few jobs are created in the industrial sector.

Barraclough and Domike show how employment in industry lagged behind population increases and conclude that in Latin America "a large portion of the farm population entering the labor market during the next few decades must continue to seek employment in farming or in related industries" (27: 415). In presenting the case for the need to increase employment in rural areas, Thiesenhusen cites United Nation's statistics which show that in Latin America between 1925 and 1960, manufacturing was able to absorb only a little over five million of the twenty-three million people added to the urban labor force in that period (243: 871). This problem is not confined to Latin America. The Commission on International Development reports that the failure to create employment is "the most tragic failure of development. All indications are that unemployment and underutilization of human resources have increased in the 1960's and that the problem will grow even more serious." The Commission declares that "it is in the volatile cities of the

developing world that agricultural stagnation and industrial unemployment combine to produce their gravest consequences" (58: 60-61).

Under the existing circumstances, it is irrational for Salvador to import horticultural products from São Paulo. Physical constraints to the cultivation in Bahia of many of these products do not exist, as witnessed by the agricultural revolution in the município of Jaguaquara. The obstacles are found in the obsolete agrarian structures of the Northeast. Programs and policies are required which will replace these antiquated structures with institutions that will enable the small farmer to be more productive. This is especially important in the field of horticultural products, because it is an area suitable for labor-intensive practices. If the subsistence farmer is integrated into the regional economy, he will assist in resolving the urban food supply problem instead of being driven from the land to urban slums where increased demand makes the food problem even more serious.

Policies should not seek to freeze the farmer on the land nor to reverse the trend of urbanization. In Brazil, as throughout the world, it seems that urban areas will continue to grow at a faster rate than rural ones. The objective is summed up in Groh's description of the black migration from the rural south to urban areas in the United States.

A continuing rural-to-urban transition is, of course, the inevitable shape of our national future. It should come, however, as a natural and voluntary movement toward greater opportunity, not as a forced exodus from despair.
(116: 265)

To urge support for the small farmer is not to suggest that productive large and medium farmers should be penalized or ignored. Recommendations to alter the structure of agriculture are not intended to serve as a rallying cry for the formation of agrarian Luddites to destroy tractors and burn supermarkets. That sector of Brazilian agriculture and the food distribution system which is already a part of modern Brazil should receive continued assistance, encouragement, and support. What is suggested here is that the small farmer, the traditional producer of food products in the Northeast, should be recognized as a vital element in the search for solutions to the problems of food supply and regional development. He has been ignored for centuries, and the present problems in these two areas are the logical results of this neglect. The subsistence farmer remains a part of archaic Brazil, and the time is long overdue to concentrate efforts on enabling him to make the transition to the modern sector of the economy.

Programs should be directed toward two basic policy areas; one involves marketing and the second concerns rural development. Projects should maintain in operation the existing outlets in urban areas for the produce of the small farmer--namely, the public markets and the movable fairs.

Unfortunately, in Salvador the public markets are under attack, and their wholesale functions are being transferred to CEASA/BA. In many urban areas, public markets are threatened with extinction because of the pressure of urban expansion. This problem is especially serious in Salvador because of the city's topography. Municipal leaders, seeking modernization and progress, are often too ready to recommend the elimination of these markets, failing to realize their importance as an outlet for the surplus of the small farmer. At the same time, they are the source of food purchases of the poor and generators of employment. Public markets are important factors in the life of the impoverished. Sete Portas, Agua de Meninos, and the Mercado Modelo are depicted in the novels of Jorge Amado as prominent landmarks in the world of Salvador's poor (10: 32-33, 38; 11: 6, 37, 55). But because the markets are operated by the poor and used by the poor, they have no defenders in the councils of power where public markets are often seen only as disorganized, filthy, and stench emitting obstacles to progress. In restructuring marketing institutions, as in the construction of CEASA/BA, care must be taken to retain the advantages of public markets.

Salvador's movable markets represent an admirable adaptation of a marketing device to the needs of the city. The subsidy received by the fairs from CEASA/BA is an excellent investment. Continued support should be given to this element of the marketing system which should become an even more important outlet for the produce of the small farmer as the signifi-

cance of the public markets declines. It is essential that urban outlets for the small farmer's produce be maintained. It is senseless to attempt to increase the productivity of the subsistence farmer if no outlets for his produce exist in urban areas.

The second area of policy concern is in the field of rural development. The advantages of successful programs in this field are a reduction in the rate of rural-urban migration, an increase in the food supply for urban centers, the creation of a demand for manufactured goods, and stimulation of local economies in rural areas. There are great rewards for a successful rural development policy designed to assist the small farmer, but the obstacles to achieving the goal are formidable. These obstacles should not be underestimated. Any programs that seek immediate and spectacular results are doomed to failure. The ultimate goal of these programs is no less than to help the subsistence farmer move from archaic to modern Brazil, an arduous journey measured in terms of centuries rather than of kilometers.

The situation of the subsistence farmer must be appreciated. His farming methods have been handed down from father to son and have withstood the test of time. To the outsider, his farming techniques may seem uneconomical, inefficient, and irrational. To the farmer himself they are successful, because he has survived. To the outsider the small farmer may appear to resist change, because he is apathetic. A better description is that he is tenacious. He is extremely reluctant to

relinquish tested farming methods that guarantee human existence, precarious though it may be, in exchange for new and untried ways. As Crist and Popenoe explain--the farmer is eager to increase his income, but he values his security and survival above everything else (69: 502).

Programs to assist the subsistence farmer by altering agrarian structures will be resisted, criticized, and ridiculed by rural elites. Just as the small farmer seeks security in traditional farming practices, so the local holders of power seek security in the maintenance of traditional economic, political, and social patterns. Assisting the small farmer to break the shackles of archaic agricultural practices threatens these long-established relationships. The more successful rural development projects become, the louder will be the cries of subversion from local power brokers, a cry that unfortunately may be sympathetically received by some in the national government when they recall the Peasant Leagues.

A sober and realistic appraisal of the difficulties to be encountered in rural development activities must take the obstacles mentioned above into consideration. The problems are tremendous but not insolvable. The government agencies required to commence the long and difficult task of rural development already exist. New organizations are not required. However, a reordering of priorities is essential so that agricultural research, rural extension programs, assistance to cooperatives, and rural education are regarded as among the

most important projects undertaken by the government--indeed, so significant that they receive backing and support commensurate with their importance.

Research programs should be directed at the needs of the small farmer. Extension services should assist him in using research findings. Cooperatives must be formed to provide marketing facilities and to serve as channels for rural credit. CEASA/BA should continue to provide preferential treatment for cooperatives at the new supply center and maintain, if not increase, its support for movable fairs. Underlying all programs is the need to augment MOBRAL's efforts in rural areas to increase educational levels. The activities of all of these agencies must be coordinated and directed toward the achievement of the goal that they all share.

Recent decades have seen the physical integration of Brazil by the construction of thousands of kilometers of highways. The surge in industrialization has been widely heralded as the "Brazilian miracle". Another miracle, perhaps even more difficult, is now required--the integration of the subsistence farmer into modern Brazil. The obstacles confronting this goal are formidable; success will be delayed and undramatic. Yet, the accomplishment of this task is at least as important to national development as an integrated transportation network and a modern industrial base. Given the dynamism of the Brazilians, it is a goal that can be achieved if the determination to do so exists.

APPENDIX

MICRO-REGIONS OF BAHIA*

The extensive, elevated tableland that divides the valley of the São Francisco River from that of the Tocantins River has an average elevation of 800-900 meters. This westernmost section of Bahia consists of two micro-regions.

131--Chapadões do Alto Rio Grande. Cattle raising on the open range is the primary economic activity of this micro-region which, according to the 1970 census, had the lowest population density of all the micro-regions in Bahia with 1.98 inhabitants per square kilometer. The proposed highway which will link Brasília with Salvador will provide an economic stimulus for this area.

132--Chapadões do Rio Corrente. This region, which includes the basin of the Corrente River, has large areas of fertile soils and, consequently, more agricultural activity than micro-region 131. Castor beans and sugar cane are the main commercial crops, and Santa Maria da Vitória, with a 1970 urban population of 6,938, is the largest city in the area.

Two micro-regions compose the large area known as the São Francisco Depression.

133--Baixo-Médio São Francisco. This micro-region contains municípios of extensive area and low population density. The climate is semi-arid, and there are vast expanses of caatinga used for cattle

*The information in this appendix was adapted from data contained in(228).

raising. The São Francisco River is the main line of communication, and the area's population is clustered in a series of small cities, such as Xique-Xique and Barra, along the river. Subsistence crops and such commercial crops as sugar cane and onions are cultivated in the flood plain of the river.

134--Medio São Francisco. The general characteristics of this region are the same as those of micro-region 133. Bom Jesus de Lapa, an important city for religious pilgrimages, is the largest urban area in the region with a 1970 population of 12,757.

Three micro-regions compose the elevated center portion of Bahia, a zone of low population density and a poor transportation network. Mining and cattle raising are the most important economic activities of this area.

135--Chapada Diamantina Setentrional. The average altitude of this region is 800-900 meters, and caatinga vegetation predominates. Mining for gold and diamonds is carried on in this area, especially in the municípios of Morro do Chapéu and Gentio do Ouro. Cattle raising and the commercial crops of cotton, castor beans, and sisal are found in this micro-region. Bean production is concentrated in the município of Irece.

136--Chapada Diamantina Meridional. Part of the population of this micro-region is engaged in quartz and diamond mining. Sugar cane, onions under irrigated cultivation, and castor beans are the main agricultural crops. Cattle raising in the caatinga completes the agricultural sector. The major cities of this micro-region are Andaraí and Paratinga, with 1970 populations of 2,262 and 3,080, respectively.

137--Serra Geral da Bahia. This micro-region is composed of the highlands of the Serra Geral, the northern extension of the Serra do Espinhaço, in its eastern sector and the lowlands of the São Francisco Depression in its western sector. Subsistence agriculture is found in the valleys of the Serra Geral, and cattle raising is located in the caatinga.

Five micro-regions make up the northeast sertão of Bahia.

138--Senhor do Bonfim. Cattle ranching and the cultivation of sisal are the major economic activities of this micro-region. The region is one of low population density. The city of Senhor do Bonfim, with a 1970 population of 21,414, is the major urban area of this region.

140--Corredeiras do São Francisco. This micro-region is one of the driest areas of the state, receiving less than 500 millimeters of rainfall annually. The population is concentrated on the alluvial plain of the São Francisco River where irrigation has made agriculture possible. Onions are the main crop. Juazeiro is the largest urban center of the micro-region with a 1970 population of 36,273.

141--Sertão de Canudos. In this micro-region cattle ranching is gradually being replaced by the cultivation of sisal as the most important economic activity.

142--Serrinha. This micro-region is the most important sisal-producing area of the state. Ranching is also an important economic activity.

147--Sertão do Paulo Afonso. Rainfall in this micro-region ranges from 500 to 650 millimeters annually. Cotton cultivation along the margins of the São Francisco River is an important economic activity.

Seven micro-regions compose an extensive area of the state where the raising and fattening of cattle is the major economic activity. These seven micro-regions are generally regarded as the transition zone between the humid coastal zone and the semi-arid interior.

139--Piemonte da Diamantina. The higher elevations of this micro-region receive sufficient rainfall for the maintenance of pastures where cattle are fattened after being driven from the center of

Bahia and the north of the state of Minas Gerais. Caatinga vegetation predominates in the lower areas.

143--Feira de Santana. This region has traditionally been an important area for the fattening of cattle from the semi-arid interior. The importance of the major city of this region, Feira de Santana, the second largest city in Bahia, has been reinforced, because it is one of the most important highway junctions in the Northeast.

144--Jequié. Within this micro-region are found a variety of areas ranging from the humid coastal zone to the semi-arid interior. Traditional economic activities were cattle ranching and the cultivation of cacao. In recent years this micro-region has become an important source of horticultural products for Salvador.

145--Planalto de Conquista. The economy of this micro-region is based on cattle ranching. Vitória da Conquista, with a 1970 urban population of 82,477, is the area's most important city.

146--Pastoril de Itapetinga. This micro-region, located between the cacao zone and the Conquista plateau, has cattle raising as its economic base. The city of Itapetinga, with a 1970 population of 30,578, is competing with Feira de Santana as the most important center for the sale of cattle in Bahia.

148--Agreste de Alagoinhas. This micro-region, located in the transition zone, has cattle ranching as its major economic activity.

153--Encosta do Planalto de Conquista. Located between the zones of cacao cultivation and extensive cattle ranching, this micro-region has large landholdings devoted to both of these activities, with cattle ranching predominating.

Of the twenty-six micro-regions that compose the state of Bahia, seven are located in the humid coastal zone.

149--Litoral Norte Baiano. Cattle ranching and the cultivation of coconut palms are the main economic activities of this micro-region.

150--Salvador. This micro-region consists of the metropolitan area of Salvador, and the economic influence of the state capital predominates. Sugar cane has historically been the main agricultural activity of this area.

151--Recôncavo Baiano. This micro-region consists of three basic agricultural areas. Sugar cane predominates in the northern portion, tobacco in the northwest, and subsistence crops in the southwest.

152--Tabuleiros de Valença. Located between the micro-regions of Recôncavo Baiano and Cacaueira, micro-region 152 has had limited economic development because of poor communications with the rest of the state. The cultivation of the dende palm is one of the major agricultural activities.

154--Cacaueira. The cities of Ilhéus and Itabuna, with 1970 populations of 58,529 and 89,928, respectively, are the major urban areas of this micro-region. Cacao cultivation is the economic base of this micro-region.

155--Interiorana do Extremo Sul da Bahia. Because of the lack of communication with other areas of the state, this micro-region has been only slightly populated and has a low level of economic development. Recent population migration from the state of Minas Gerais has stimulated development and strengthened an economy based on cattle raising.

156--Litorânea do Extremo Sul da Bahia. This micro-region has the lowest population density of the seven that are located in the humid coastal zone. Cattle ranching and the cultivation of coconut palms and cacao on large landholdings are the main economic activities of the area.

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BIOGRAPHICAL SKETCH

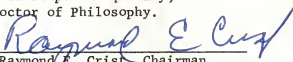
John Wainwright DeWitt was born on January 9, 1934 at Alexandria, Virginia. In 1951 he graduated from Oceanside-Carlsbad Union High School, Oceanside, California. In 1955 he received the degree of Bachelor of Science from the United States Naval Academy and in 1967, the degree of Master of Arts from the University of Florida.

From 1955 to 1960 Mr. DeWitt served as an infantry officer in the United States Marine Corps. In 1960 he resigned his Marine Corps commission and entered the Foreign Service of the United States as a Foreign Service Officer. In this capacity Mr. DeWitt has served at Monterrey, Mexico; Brasilia, Brazil; Cali, Colombia; and the Department of State in Washington, D.C.

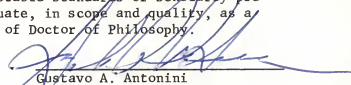
In June, 1971 the Department of State granted Mr. DeWitt's request for a two-year leave of absence without pay to return to the University of Florida to continue graduate study. Upon completion of this two-year period, he will return to the Foreign Service for an assignment in Washington, D.C. or overseas.

Mr. DeWitt is married to the former Mary Drew Marsh and is the father of two daughters, Helen and Susan.

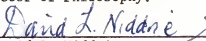
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Raymond E. Crist, Chairman
Research Professor of Geography

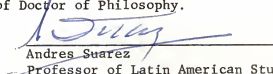
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Gustavo A. Antonini
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


David L. Niddrie
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This dissertation was submitted to the Department of Geography in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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